

MIND

A QUARTERLY REVIEW
OF
PSYCHOLOGY AND PHILOSOPHY

I.—JAMES WARD.

BY W. R. SORLEY.

THE first volume of this journal, published in 1876, contained an article by James Ward—"An Attempt to interpret Fechner's Law"—and the first number of the current volume has also an article by him—on "Bradley's Doctrine of Experience". Throughout this period of nearly fifty years he has been well known as a writer on psychology and philosophy, soon coming to be recognised as the outstanding and most original representative of English psychology and, more gradually, taking a place in the front rank of metaphysicians. He was in residence at Cambridge during the whole of this period and longer, as a Fellow of Trinity College, taking an active part in academic work—first as lecturer and (for a short time) as tutor of his College, and then, for the last twenty-eight years, as professor of mental philosophy and logic. He was thus a familiar figure to many generations of Cambridge men, while his writings extended his influence to a much wider circle. These writings will be discussed in a separate article; but perhaps it is fitting that that article should be prefaced by a short personal appreciation of him as he appeared to one who knew him well.

It is forty-five years since I first entered Ward's lecture-room behind the clock in the Great Court of Trinity. Incidentally it was my first experience of a mixed class, for Newnham and Girton were already in evidence. It was still the era of the chaperon, and perhaps the busy knitting-needles of the chaperon may have distracted the lecturer—as they afterwards did me when I first began to lecture. But, if they did, it was not apparent—for in those days the ladies

took back seats. And there was certainly no trace of distraction in the lecture. Ward's treatment at once impressed me as definitely new, and I believe that his combination of scientific method with insight into the true nature of mental facts marked something like a revolution in psychological teaching. At this time his new psychological views were being formulated in a series of privately-printed papers for a Moral Sciences Club; and these along with much other material were afterwards worked up into his famous *Encyclopædia* article on Psychology. He had plans also for the extension of psychological teaching and wished to start a University Laboratory of Experimental Psychology; but a well-known mathematician, who was interested in philosophy, scented materialism in the proposal, and it had to be dropped.

At the same time there was much College and University business to be done which occupied a good deal of his time. Cambridge was then in the throes of a Commission, and new statutes were being drafted by the Colleges and approved (or modified) by the Commissioners. In 1882 when the new Statutes came into force Ward became secretary of the Trinity Council, which took the place of the old Seniority as the executive in College government.

In academic politics, as in political affairs generally, Ward was on the liberal or progressive side. He was a Liberal by tradition as well as by conviction and his convictions inclined to the advanced wing of his party: he was from the first an ardent supporter of what is known as the women's cause—woman suffrage, women's membership of the University, etc. Later in life, however, like many others, he left the Liberal for the Labour party. He felt that the people at large had not in the past had the opportunities in life that they should have had; he held, too, that the more men of education joined the Labour Party the better it would be for the Party and for government in the future; but, perhaps oddly, I do not think that he had any belief in the Socialism which forms the leading article of the party's creed. Nor did his ideals ever blind him to the facts of life and history. He hated war as much as any man, but he was never amongst the people who said it was 'unthinkable' and refused to provide against it. Week after week, in the early years of this century, as we bicycled or walked in the outskirts of Cambridge, he would speak of the German menace and of the facts which showed that their ships were being built against this country. To him as to many others who had grateful memories of life in Germany the threat of war and then the war itself brought sorrow unutterable; but, through-

out it all, he seemed to have an almost religious confidence in the result: "The mills of God grind slowly," he would quote, "but they grind exceeding small". At the same time, he was keen to defend the right of private judgment for those whose attitude differed from his own. Not Liberalism only but Nonconformity was in his blood, and he was always inclined to sympathise with the individual who appeared to be oppressed by the institution—whether church or state or trade-union.

Public affairs and academic politics had a real place in his interests, but they never took up the major portion of his time. His main interest was in science and philosophy, and to it he devoted his life methodically and thoroughly. To his pupils he gave his time unsparingly, and not in formal instruction only: criticising relentlessly, but keen to mark every trace of good work, and stimulating them to independent enquiry. He never lost touch with the work of younger men, and his house was a centre to which they returned. He made time also to answer the queries and criticise the writings of many who had no claim upon him except their interest in philosophy. In the preparation of his own work he was almost too thorough—not being willing to commit himself until he had mastered everything that had been said on a question. Even in the later years of his life, when at work on his *Psychological Principles*, he would read perhaps a thousand pages of print, although the result might have to be summed up in a footnote.

Psychology and philosophy held an equal place in his work; but at the back of both was a consuming interest in science both physical and biological. Two of his earliest writings were the fruit of work in physiological laboratories; and, although he did not attempt the impossible by continuing independent scientific research, there were times when he looked back with regret on the enquiries to which it would at one time have been possible for him to devote himself. I think he was specially attracted by problems with a practical bearing. The physical conditions of flight and the physiological causes which might lead to the prolongation of life were two problems, widely apart in themselves, in which he had been keenly interested before their solution had come within the range of applied science. He had a good deal of the spirit of the inventor and was not without skill himself in this direction. But every fact interested him, and he was always on the outlook for its causes. Above all he was a field naturalist, observant of bird and flower and insect and learned in their ways. When quite a young boy he had

been left for a time to roam almost wild on the sandhills near his father's house at Hoylake: there he had watched the ways of birds and determined to write a book about them—not knowing that any such book had ever been written. As a young man he would spend his holidays in Shetland or some other unfrequented spot where nature reigned undisturbed; afterwards he would fish in Sutherland; when, as years went on, these expeditions had to be given up, country walks and his garden gave scope for his observation and love of nature.

This familiarity with nature was constantly shown in his conversation as well as in the illustrations scattered throughout his writings. But the science of his day provided his thinking with deeper principles also. From the first he was an evolutionist and was applying the theory beyond the range of biology; his thought was also dominated by the principle of continuity which he learned from Darwin as well as from Leibniz; and he followed with keen interest the recent developments of physics. He was a little surprised, therefore, and perhaps a little annoyed, when, after the publication of his *Naturalism and Agnosticism*, some physicists seemed to regard him as an unsympathetic critic of science. They had points of difference with him; but these points of difference lay not within science itself or in his regard for its truth and importance, but in the interpretation of its results.

In this last respect, however, he did differ from the prevailing opinion of men of science in the latter part of the nineteenth century. The difference came to be expressed by him in the distinction between natural science and naturalism and in the descriptive theory of scientific concepts. I do not think that it appears in his published writings prior to *Naturalism and Agnosticism*; but it was in his mind all along and was connected with his view of the nature and rights of the religious consciousness.

When he entered the University, Ward had already a career behind him. He had been a student of theology and for a short time a Congregationalist minister. But his preaching proved too liberal for many members of his congregation and, to avoid dissension among them, he demitted his charge and sought another profession. This step severed his connexion with the Christian church as an institution, and it probably convinced him that he was no longer in sympathy with the theological system of the churches. It did not destroy the root of religion. He never seems to have thought that natural science could give an exhaustive account of reality, or that it could explain away the belief in an un-

seen world, which was also divine, and which could be somehow present in man's consciousness. His latest writings show that he had reached a philosophical position which gives room for religious belief. This is generally recognised. What is not so commonly known is that the problem is one which had occupied his mind throughout the whole period of his literary life. Among his manuscripts is a paper with the title "Can Faith remove mountains?" It was read to the famous Cambridge society known as "the Apostles" in 1879 and afterwards, more or less altered, to other societies. In a revised form and entitled "Faith and Science," the substance of it was read to the Synthetic Society and is (privately) printed in their records. Once again revised and expanded, it was given as a lecture in San Francisco, in 1904; but as yet it has not been published. It is of interest, therefore, to go back to the earliest of these manuscripts.

"By 'faith'" (he writes) "I mean not the intellectual acceptance of a creed but that personal trust and confidence in an Unseen Being to which the religious in all ages have attributed their power to 'overcome the world'. No one with a grain of psychological insight can doubt that the actions of such men as St. Paul, St. Francis, John Wesley or Henry Martyn were as really shaped by such a personal trust as were the actions, say, of the soldiers of Washington or Napoleon by their confidence in their leader. . . . Their actions could hardly have been more conformed to their belief if that belief had been exchanged for the face to face knowledge which, they were assured, would one day consummate it. And by 'mountains' I mean chiefly all that in the light of modern science and philosophy constitutes the impossibility of this consummation. . . . By 'faith removing mountains' then I mean realising its object, and so justifying itself by the actual experience and knowledge of what has been hoped for while yet unseen."

The writer goes on to "protest against that finality which regards our most general conceptions as if they were hand-cuts on a once vagrant body of facts now at length secure and well-known to the savant". "To know," he says, "we must abstract, *i.e.*, ignore as comparatively irrelevant details with which we cannot cope, and so we spin over 'the solid ground of nature' the thin webs of our systems and we think we have comprehended the universe." "The worst we can say of religious faith," he goes on, "is that it leads to a line of conduct that present facts do not warrant, that it is not rational in the sense of being clearly deducible from anything that we certainly know;" and then he proceeds to the

argument that "faith" of this sort was shown in almost every forward step in the history of the organic world. In this respect there is "nothing unique in religious faith". But how are we to distinguish false faith from true? "The only test we can apply from our present point of view is that of success, survival of the fittest. . . . Nothing that science can say will ever quench men's faith in God if they find that on the whole they make the best of this world by it, while on the other hand atheism will assuredly prevail if here, take him all in all, the atheist proves the better man." Here, it would seem, is an anticipation of the pragmatism which William James first promulgated twenty years later. But it is a pragmatic test of truth, not a pragmatic theory of the nature of truth. Moreover, this sort of pragmatism is not merely a test of truth; it is also a way towards its discovery. "The practice which justifies itself by results is also in the end at one with the theory it has helped to complete. . . . As the creatures that strained towards the light now have eyes to see, while those that cleave to the primal slime are full of darkness, may it not be that those among men who trust their religious impulses will attain in the end an insight as superior to all the inferences based on sight as sight itself is to the gropings of the blind?" The development of self-consciousness has been a long and slow process, and it may not be the highest form of psychical life possible. "May not the straining after God to which faith in Him leads quicken this new consciousness into life and show at length that it was from Him the impulse sprang? For if we regard the world as a whole as the Unknown struggling into life, may not religious faith be a higher phase of this struggle? and if so is it not as likely to be consummated as the lower and blinder impulses have been?"

These sentences may convey some apprehension of the ideas which were deepest and most permanent in Ward's life. His confidence in them increased as time went on and his thinking encountered one problem after another; and the positive conclusions to which they point fit harmoniously into the philosophical views at which he finally arrived. At the close of his life he would have repeated with increased conviction the words which occur in this early paper: "The tide that seems to have overwhelmed the legends of the church and the dogmas of the school will, I verily believe, turn out to have left the essence of religion purer and plainer than before."

Ward was a man of fine physique, alert and slim, with distinction marked on his features—broad and lofty brow,

eagle's nose, and keen eyes that shone best in benignant mood. "A bird of prey with a bad digestion" was his own comment on a sketch of his profile by Rothenstein. He had two serious illnesses in his life—in early and in later manhood—but neither left any permanent effects upon his health; and one felt that, in dying at the age of eighty-two, he was cut off prematurely. Both his parents lived into their nineties; and he himself was not subject to any minor complaints, except that trouble of weak digestion. With that, however, went acute sensitiveness and an occasional attitude of superficial pessimism. But the pessimism was only on the surface. He believed that there was real progress towards goodness in the world—in spite of many set-backs. He was conscious also that his own lot had been a happy one; and he would not have been happy in it had it not led to higher values. Only a few months ago he said to me, quoting Scripture, "The days of our years are threescore years and ten; and if by reason of strength they be fourscore years, yet is their strength labour and sorrow"; but I have not found it so".

II.—THE PHILOSOPHY OF JAMES WARD.

BY G. DAWES HICKS.

I AM responding to the request of the Editor of *MIND* that I should endeavour to gather together in a concise and connected account the distinctive contributions to English Philosophy made by the distinguished thinker, whose death on 4th March last every reader of this Journal will deplore. I am well aware that I am undertaking a task I can only very inadequately fulfil. James Ward was a man of such wide and varied interests, his philosophical results were reached through lines of reflexion which took their rise in so many different spheres of human inquiry, that it is well-nigh impossible for another to do justice to the multitudinous ramifications of his constructive work, or to feel any measure of confidence in being able to fix upon the features that would have seemed to him of primary importance. He brought to bear upon philosophical problems an acquaintance with the facts and principles of natural science such as few philosophers have possessed, and one of the charms of his writings consists in the wealth of illustration by which his argument is invariably enriched, drawn from the fields of physics, biology and physiology. Furthermore, I labour under the disadvantage that on certain fundamental issues, such, for example, as on that of the possibility of satisfactorily interpreting the facts of nature in terms of a monadism, my conclusions, so far as I have succeeded in reaching any, do not coincide with Ward's; and, on that account again, I shall be liable to misjudge certain of his leading conceptions. I do not, however, here propose to play in any way the part of a critic, but simply to try to form as impartial and judicial an estimate as I can of a philosophy which, whether it be destined to win adherents or not, is certainly one of the foremost achievements of speculative thought in recent years.

Notwithstanding his profound knowledge of German metaphysics, and his genuine admiration of Kant, Herbart, and Lotze, I have always pictured James Ward to myself as a typically English philosopher. He belonged, I think,

rightfully to the great traditional school of Locke, Berkeley and Hume, and I do not imagine he would have wished to dissociate himself from that tradition. He had all their regard for empirical fact, and all their distrust of too rapidly obtained general principles. "Philosophers," he said in one of his earliest papers, "may not be poets, and cannot be seers. Ideas are indeed their sole province, but only such ideas as deal straight with facts." There is a vast gulf, he urged, between the knowledge we have so far attained and any absolute idealism that can claim to be more than a hope or a faith. "Many a lofty mountain that appears to have an unbroken contour from base to summit, when we view it as a whole and from afar, discloses, as soon as the actual ascent begins, minor eminences and intervening valleys innumerable. Then, for those who can only climb, true progress requires that they lose sight for a time, perhaps for a very long time, of the final goal; and quite possibly the really highest peak may turn out later to be one not at first descried at all. So the matter stands with philosophy: to-day we are really further on and have no call to hark back; albeit the prospect immediately before us is not the grand panorama seen as in a vision by those who went before." More specifically, however, he approached the discussion of philosophical problems, as the leaders of the English empirical school had always approached them, from the basis of a psychological analysis of the individual mind. Not that he ever committed their mistake of regarding the critical investigation of knowledge as a psychological problem; he had learnt too thoroughly the lesson of Kant for that. But he realised, early, I think, in his career, that the two ways of dealing with the nature of experience, essentially distinct though they are, must necessarily throw light on one another, and that for a complete treatment of human knowledge we need to employ both. And, so far as psychology itself is concerned, the standpoint of Locke, Berkeley and Hume seemed to him to be the proper standpoint. Locke, he pointed out, found himself shut in within a circle of 'ideas' and powerless to explain his acquaintance with a world assumed to lie beyond it, but he was able to give a very good account of some of those 'ideas' themselves, and the most important advances in psychology have been made by those who have kept closely to the 'way of ideas'. By abolishing Locke's 'hypothetical outer circle,' Berkeley left the epistemological problem as hopeless as before, but he made the psychological clearer than ever. "Of all the facts with which he deals, the psychologist may truly say that their *esse* is *percipi*, in so far as such facts are facts

of presentation, are ideas in Locke's sense, or objects which imply a subject." This was, as regards psychology, Ward's position from first to last; psychology, he maintained, never transcends the limits of the individual. And I think he was convinced that, while no doubt from the point of view which a completed philosophy would occupy the epistemological inquiry is the prior, yet *for us*, stationed not at the centre of things but occupying 'a modest position somewhere in the extreme ramifications of reality,' the prior task is to explore what lies within the confines of our individual experience, and to determine, so far as possible, its constitution and nature. In other words, he would, I think, have agreed so far with Locke in holding that "the first step towards satisfying several inquiries the mind of man is very apt to run into is to take a survey of our own understandings, examine our own powers, and see to what things they are adapted".

At all events, such was the course actually followed in his own philosophical development. For some twenty years, after he had been elected Fellow of Trinity in 1874, he was occupied mainly with psychological problems, and it was during those years, in 1886 namely, that his truly epoch-making *Encyclopædia* article on Psychology was published. When one compares the article with his subsequent work, *Psychological Principles*, which appeared only seven years ago, it becomes evident that the philosophical investigations in which he had meanwhile been engaged did not leave his psychological standpoint wholly unaffected. He found reason to modify, for example, in one important respect, the conception of individual experience which he had accepted originally from Locke; he had taken 'ideas,' or 'presentations' to be 'states of consciousness,' modifications of the mind consequent either upon stimulation, or upon its being affected by other presentations; while later, on grounds largely of an epistemological kind, he dismissed this view of the nature of 'presentations' as an unwarranted assumption. But, already in the *Encyclopædia* article, Ward's breach with the 'associationism' or 'presentationism,' into which the 'new way of ideas' had, in the hands of James Mill and Bain, developed, was complete,—far more complete than, for instance, Bradley's turned out to be in the series of psychological essays, the first of which appeared in the same year as the *Encyclopædia* article, that were contributed to the pages of *MIND*. For Ward was confronted at the start with the question whether 'ideas' could be credited with mutual attractions, repulsions, associations, complications, etc., and thus the postulate of an experiencing

subject be dispensed with, any subject, that is to say, other than the complex 'idea' which is generated under appropriate circumstances when 'ideas' are grouped with sufficient distinctness. If a successful account of individual experience could be worked out on those lines, he was ready to concede that the procedure would be scientifically justified. His contention, however, was that every such attempt had broken down utterly, and that, from the nature of the case, no other result could be expected. If a series of 'ideas' is what is known or presented, then what knows, what the series is presented to, cannot itself be a series of 'ideas'; the very phrase 'being aware of' expresses a relation, and like any other relation, it implies more than one term. No one confounds painting with pictures or singing with songs, yet psychologists were constantly confusing the activity implied in consciousness with the objects or products of that activity. Indeed, in a measure the case was even worse. Such phrases, for example, as that 'the mind discriminates this or that' were of frequent occurrence in their writings, and naturally one would expect to learn that, apart from this activity, the 'ideas' of which it is conscious are not discriminated. Instead of that, we see the tables turned: the activity is attributed to the 'ideas' and not to that which is conscious of them; the singing arises from the song, and not the song from the singing. Nor could the predicament be avoided by the expedient of making different members of the series subject and object in turn. The series is throughout a series of objects—and to suppose that a later object in the series can be aware of the earlier one would amount simply to a futile attempt to convert the former into a subject while still protesting that it is an object. Ward, then, laid it down as axiomatic for psychology that a primordial duality of object and subject is essentially involved in any item of what is entitled to the name of 'experience': always the experienced not only implied but stood over against the process of experiencing. The psychological concept of a subject is not, however, he maintained, forthwith to be identified with the metaphysical concept of a soul. A psychology with a soul may become as embarrassing as a 'psychology without a soul,' if by 'soul' be meant an inner zone of being that lives its own life as independently of any objective correlative as Aristotle's deity lived its life independently of the world. What is requisite for psychology is a self for whom there are 'ideas' or 'presentations' *plus* the series of 'presentations' or 'ideas' themselves, the two being in that unique relation to one another which we call the subject-object relation.

Ward was well aware of the dangers to which the conception just indicated was exposed. The associationist psychology in England had at least given the death-blow to the Scottish school with its interminable faculties, and a like fate had befallen the "*alte Vermögenstheorie*" at the hands of the Herbartians in Germany. In further working out the notion of subject, Ward showed very clearly that it in no way committed him to the faculty doctrine. In the first place, he cleared the ground by a preliminary inquiry into the nature of feeling. Understanding by the term 'feeling' susceptibility to pleasure or pain, he sought to establish the position that pleasure and pain (the state, namely, of being displeased) are not 'presentations' in the sense in which touches and tastes, colours and sounds, are. They are never, he argued, localised like the former nor projected like the latter; they are not elaborated in conjunction with sense-data and movements into percepts of external things. And if feelings do not fall to the side of the object, they must fall to the side of the subject, be, that is to say, states or conditions of experiencing. Moreover, if a duality of subject and object is essential for all experience, it follows that a succession of 'feelings' cannot, as such, make up an experience. The minimum of psychical life must involve not only a subject feeling but a subject having qualitatively distinguishable presentations which are the causes of its feeling. In the second place, when we turn to the states of mind indicated by such terms as perceiving, imagining, thinking, desiring, willing, and so forth, it is obvious that each of these implies activity and an object. The possibility, therefore, at once becomes apparent of explaining the diversity of the various acts by the diversity of the objects upon which they are directed. That the objects are different is certain: in perception, for example, we are mainly concerned with what Hume called 'impressions,' in imagination and memory with what he called 'ideas'. And the still wider difference between cognition and conation would seem to be explicable along similar lines, when we take note of the fact that, considering for the moment the simplest cases of each, the objects of the one are sensations and those of the other motor presentations. Ward's contention was, then, that there is an underlying sameness in all the variety of psychical acts, and this common element seemed to him appropriately named Attention. Accordingly, psychological facts might be grouped under two entirely distinct categories—one subjective faculty or function of action-under-feeling, or attention, on the one hand, and a field of attention consisting of presentations or objects on the other. Just as in

physics, the legion of 'forces' had been discarded without abandoning the conception of force altogether, so in psychology the legion of faculties had gone without abandoning the conception of faculty altogether. In the former case, there had resulted the exacter conception of energy, in the latter the exacter conception of attention. The consequence was that, in proceeding to describe in detail the various modes of the mental life, Ward could avail himself of all that seemed to him sound in the work of the presentationists, while making use, at the same time, of the notion of an active and feeling subject as throughout the essential correlate of all the different kinds of presentations.

He insisted, however, that the notion of a subject should not be merely acknowledged, but seriously utilised. It seemed to him absolutely impossible to bring out the characteristics of experience by simply saying: There are such and such presentations or feelings or movements. Psychological statements must (and, indeed, always do) take the form: The conscious subject has such and such presentations, feels thus or thus, and acts in this wise or in that. This 'form of consciousness' could not be eliminated without mutilating the facts of concrete experience, and ignoring what was essential to each of them. In other words, the influence of Kant upon Ward's work is here again prominent. That "the 'I think' or 'I am conscious' must be capable of accompanying all my presentations" he would make a cardinal principle of psychology no less than of the theory of knowledge. But his extensive knowledge of biology and of the facts of organic evolution enabled him, in the light of this principle, at once to set aside one of the blunders of presentationism which Kant had unfortunately inherited from Hume. Kant, namely, had been the first clearly to see that unity of self is the indispensable condition, without which there could be no experience whatsoever. He had thrown, however, the whole burden of providing this unity upon the subjective side of experience. He had pictured experience as beginning with a mere manifold of disconnected sensations, which require to be synthesised into a temporo-spatial continuity in order to be known. This, Ward contended, was an unworkable thought. Whatsoever development an individual experience may undergo, it does not *become*, but *always is*, a unity; the unity, that is to say, pertains to the objective as well as to the subjective. Presentations are not isolated particulars, somehow strung together on a 'thread of consciousness'; however distinct and definite it may be, a presentation is still part of a larger whole. An absolutely new presentation, having no

sort of connexion with those that preceded it until the subject has synthesised it with them, is an invention of speculation, not a fact yielded by observation nor legitimately inferred therefrom. On the contrary, what we actually find, at any given moment, is a certain whole of presentations, a 'field of consciousness,' psychologically one and continuous; and, at the next moment, not an entirely new field but a partial change within the old one. And proceeding backwards from this continuity as we are aware of it now, we are led, so Ward argued, alike by particular facts and by general considerations, to the notion of an objective continuum which, partly through the exercise of subjective selection, is gradually differentiated, but which is always there as an unbroken whole. Advancing experience is, that is to say, like a pattern coming out bit by bit; but the pattern never resolves itself into a plurality of disconnected elements, having a distinctness such as the atoms of the physical world have been supposed to have.

In Ward's view, then, the duality of subject and object is primordial; presentations are from the first given as objects, and they constitute for the percipient the objective world. But he would have it noted that the terms 'subjective' and 'objective' do not bear in epistemology the significance which they bear in psychology. Epistemologically considered, it might be said that the term 'objective' means so much of experience as is common property, and 'subjective' so much as is private property; whereas psychologically considered 'subjective' refers to the owner and 'objective' to the property that he owns. In other words, what is psychologically objective is often treated as epistemologically subjective; and, although the latter treatment may be erroneous, the important problem in any case arises of determining how and when the objective world which is at first the individual subject's own presentations acquires the additional characteristics of universality, of being the common object of a number of individual subjects. Ward's solution of the problem appears to have been that the transition comes about through the peculiar way in which we interpret the perceptive experience of other minds than our own. Through common thought and language, I am led to assume not merely that another man's experience is distinct from mine, but that it is *in* him in the form of sensations, perceptions, etc., conceived as subjective states. Notwithstanding the fact that my presentations are for me objects, through a process of introjection I take his presentations to constitute an internal world in him, and naturally I come to apply a like conception to myself.

Thus, the interpretation of perceiving in me as an internal state referring to an object over and above the sense-presented content is posterior to the recognition by me of other minds than my own. The passage from the 'immediate object' of individual experience to the 'mediate object' of common experience is effected, so Ward contended, mainly through means of intersubjective intercourse, and the various operations to which intersubjective intercourse gives rise. The common experience which results is, in truth, a continuation and extension of individual experience; but so far as the theoretical knowledge of nature is concerned, intersubjective intercourse leads, it may be said inevitably, to the omission of that reference to a conscious subject characteristic of the objects of individual experience. The *one* sun which is the common object of ten men looking at it, since it is not the peculiar object of *any one* of the ten, comes to be considered as independent of them all *collectively*, and indeed of any consciousness whatsoever.

The argument I have just sketched called forth a considerable amount of criticism when it was first put forward in the Gifford Lectures on *Naturalism and Agnosticism*, published in 1899. It was argued, for example, that no transition would be possible from a strictly individual experience—that if we start with an experience which is by definition solipsistic, then we can never get beyond it. In reply, Ward insisted that that had been an essential part of his argument throughout, that his argument had rested on the basis that "for individual experience, for psychology, our so-called 'sensations' are not subjective, not 'feelings' but objects, or rather changes in an objective continuum, environment, or non-ego". If experience were ever exclusively subjective, it would be as much, if not more, a problem how we ever come to be aware of ourselves as how we come to be aware of what is not ourselves. Not only, however, has every self its correlative not-self, but his contention had been that individual selves were not mutually shut off from one another like the cells of a hive, that, while they were exclusive as regards their standpoint, they were, in consequence of intersubjective intercourse, not exclusive as regards their boundaries.

Ward had maintained that a subject is as necessary for universal as for individual experience, and that the philosophic problem of finding a unity in experience would be a hopeless one unless the transsubjective world could be regarded as standing in relation to a subject which is one and continuous with the subject of individual experience. Perhaps it is not altogether surprising that his argument in this connexion

should have given rise to misunderstanding. By some critics it was taken to be an attempt to establish the position that nature stood to God in a relation similar to that in which the presentational continuum stood to the individual subject, and the conclusion was drawn that the argument culminated in a metaphysic closely allied to that of Hegel. Such a culmination Ward had, however, by no means intended to make for. He did not mean to imply that the subject which is necessary for universal experience must necessarily be God. He was working rather with Kant's conception of consciousness in general, *Bewusstsein überhaupt*, and his point was that universal experience is an experience that is peculiar to no one intelligence but common to all intelligences. What he had really been trying to show was that any individual who through intersubjective intercourse had advanced to the stage of reason and self-consciousness, and had thus transcended the limits of individual perceptive experience, had *ipso facto* attained to a knowledge of nature or of the trans-subjective.

When later on Ward came to the task of laying out systematically his own metaphysical conclusions in *The Realm of Ends*, a work which was given to the world in 1911, he had necessarily to make clear his attitude towards the Hegelian mode of thought which was at that time so strongly represented in the English Universities. With what has been called 'the essential message' of Hegel—namely, that outside of spirit there is not, and cannot be, any reality—he was obviously in accord; so much his critical examination of naturalism and of metaphysical dualism had rendered manifest. But, as an outcome of long and careful scrutiny of Hegel's writings, he had convinced himself that an idealism of the type it is customary to call 'absolute' is neither tenable in itself nor intellectually satisfying in its results. In the first place, it was well-nigh inevitable that a mind imbued as his was with a sense of the importance of testing philosophical generalisations by their compatibility or incompatibility with empirical details should look upon Hegel's idealism as having been too cheaply and easily won. Although, in embarking upon a 'thinking consideration of things' Hegel had, as a matter of fact, to begin with a 'voyage of discovery' and to take his start from this bewildering scene of particularity and contingency, yet his aim had been to exhibit the world as evolved by a necessary logical process from an ultimate unity, variously described as 'the Idea,' 'Spirit' or 'the Absolute'. The aim seemed to Ward to be an impossible aim, and the method by which it was sought to achieve it a perverted

method. In philosophy, he urged, we cannot 'begin at the beginning,' with a 'One above' that is theoretically inaccessible; the attempt to begin from the standpoint which only a completed philosophy would occupy is doomed, at the outset, to failure. The problem which the universe sets us is an inverse problem, what is 'first *ad nos*' is not 'first *ad universum*,' and we are bound to set out upon our enterprise from where we actually are, that is to say, *in mediis rebus*. And, in the second place, whenever the method had been followed of passing over the 'Many' in the hope of deducing them from an absolute 'One,' previously postulated on *a priori* grounds alone, that method had proved itself illusory; the unity from which a system of that sort starts had invariably involved the dissolution of the plurality which, in fact, it finds. If the Absolute, reached in this way, be described as Mind or Spirit, then why this Mind or Spirit should involve finite minds or spirits, especially such as are 'in endless error hurled,' becomes inexplicable; the question why this Mind or Spirit, like the *νόησις νοήσεως* of Aristotle's divine being, should not be completely self-sufficing, rendering anything beside not only superfluous but even incompatible, presents us with a crux which no ingenuity is capable of surmounting. Hegel's Absolute seems at one time to be a perfect Self with no hint of aught beyond its own exhaustive self-consciousness, and at another time not to be a self at all, but only a realm of spiritual values, such as become realised, in art, religion and philosophy, by and through human subjects.

True, then, to the method of empiricism, Ward started unreservedly from the standpoint of what he named pluralism—the common-sense view of the world, the view which we all take when we are not philosophising. We find ourselves, that is to say, in the midst of a huge environment of persons, living creatures, and what we call 'things'. So far as our own concrete experience is concerned, the fundamental characteristic of it is that already dwelt upon of the duality in unity of subject and object. On the subjective side, the experiencing takes place in one individual centre; on the objective side, the experience is likewise one experience. The subject is continually in touch with one world, one environment,—a world, an environment, in which there is continual change, process, development. Psychologically considered, a self-conscious subject had evinced itself as being a subject that attends to changes in the sensory-continuum, is, in consequence, either pleased or pained, and by voluntary attention produces changes in the motor-continuum. So conceived,

the self-conscious subject can obviously never be a *purely* cognitive subject. Although an object must be cognised before it can be liked or disliked, yet it is to interesting objects that the individual mainly attends, and it is with these, therefore, that he gradually acquires a closer and more precise acquaintance. The cognitive aspect of experience is rather, as indeed the etymology of the word suggests, one of experiment than of mere contemplation. From this point of view, conation may be said, in a sense, to be more fundamental than cognition; we begin by trying and end by knowing. "Practice is the parent of theory and realisation the surest verification." The standpoint of pluralism, so understood, is, Ward insisted, the historical as contrasted with the naturalistic standpoint. In the world of history, we are ever in the presence of individual agents—individual agents who have no counterparts, and whose like, all in all, we shall never meet again. The things and events with which we have chiefly to deal are not natural phenomena—these form merely the setting, the scenery—but the acts and deeds of the *dramatis personæ* themselves. Furthermore, what immediately determines the individual's attitude towards natural objects is not the intrinsic nature of those objects, but their value for the experiencing individual in question; and as individuals vary so likewise do their interests and pursuits. In fine, the supreme category in the world of history is the category of good or worth, and by this standard even natural things and events are appraised. So, too, when we extend the range of history, and include within it nature in its progressive development, it is still the meaning and purpose of its things and processes we are seeking to discover.

Accordingly, Ward's first endeavour was to see how far it is possible to advance towards a metaphysical conception of the universe without deserting this standpoint of pluralism. One step forward the considerations just pressed enable us, he thought, at once to take. A consistent pluralism is bound to evince itself as a species of panpsychism or of monadism, according to which matter has got to be interpreted as but the manifestation of the interaction of perceptive and appetitive entities or monads. If the atoms of physical theory be ultimately real, they must, that is to say, be regarded as possessing some, however rudimentary, psychical properties, some individual peculiarities; and thus the historical world will be the whole. This step was certainly a momentous one; and Ward threw the burden of justifying it mainly on the principle of continuity. The modern biologist is, he insisted, already assured that the region of life extends far into that which was

once supposed to be the realm of the manimate, and there is nothing to suggest that the biologist has yet reached the limits of life. On the contrary, if there are no gaps in nature, if, as Leibniz put it, 'nature never makes leaps,' then we are warranted in assuming that all the ultimate realities of nature are, in Spinoza's phrase, *animata*, though in diverse degrees. Indeed, apart from the principle of continuity, that conclusion would seem to be forced upon us through the reflexion that an entity which can neither do nor suffer, which is nothing *per se*, would be equivalent to no entity at all. Nature was, then, to be construed as a plurality of conative and interacting individuals, the stage of development of each being indicated by the range and complexity of the correspondence between it and its environment. No one of these individuals will be presented to another as an *object* of experience in such a way as to enable the latter to realise *what* the former is in its actual essence. The objects of each individual's experience will be the *appearances* to him of such existent beings other than himself. The 'immediate objects' of perception, presentations, will be, that is to say, not subjective modifications of the perceiving mind, but ways in which, under suitable conditions, complexes of psychical entities reveal themselves to the perceiving mind, and such 'appearances' will be dependent on the existence both of the percipient and of the other entities. On the basis of a pluralism of this kind it is possible, so Ward tried to show, to proceed a long way in explaining the objective order of the world.

In the first place, instead of being compelled to assume a number of natural laws 'in force' from the outset—always an embarrassing assumption for any theory of evolution,—we can offer an intelligible account of the way in which natural laws are gradually evolved. What underlies the uniformity and regularity of the historical world is the spontaneity of living agents; and it is reasonable to conclude that underlying the uniformity and regularity of the so-called physical world there is likewise spontaneity. So far as human agents are concerned, we know that habit, dexterity, and routine do not precede experience, but arise in the course of it; so far as nature as a whole is concerned, we may surmise that there is a similar process at work whereby what is originally spontaneous and tentative eventually becomes automatic and regular. In regard to both, it is allowable to conceive of the habit formed, the customs fixed, as constituting at every stage the general trend of things, within which future possibilities lie, while what is still to do implies further spontaneity and growth, fresh experiments to be made, with their usual

sequence of trial and error and possible ultimate success. In that case, physical laws may be regarded as of the nature of statistical averages, such as frequently conceal the diversity and spontaneity of animated beings when they and their actions are taken *en masse*. Thus, then, orderliness and regularity so far as it is real will be the result of the conduct of individuals not its presupposition, and so far as it is apparent, it will be due to the statistical constancy of large numbers. Ward was here applying the conception, which he had emphasised in the *Encyclopædia* article, of automatic actions as being in truth 'secondarily automatic,' as degraded or mechanical forms of conative actions. Some of the objections which have been raised to this theory of the evolution of natural laws are not, I think, really relevant. Pringle-Pattison has, for example, contended that it virtually amounts to a doctrine of the regularities of the universe having arisen out of a condition of pure chance and chaos.¹ But Ward had expressly guarded himself from being supposed to mean anything of the kind. Everything at the start, he had urged, may be considered as having been inchoate, but nothing as having been chaotic, "unless inexperience and innocence are the same as anarchy and original sin". His point was not that there had once been no uniformity at all—the very fact that amongst monads of the kind contemplated there would be a very large measure of resemblance would itself secure a certain degree of uniformity—but that there would not be that amount of uniformity implied in the term 'natural law'. "Every act of a conative agent is," he had written, "determined by—what may, in a wide sense, be called—a motive, and motivation is incompatible with chance, though in the concrete it be not reducible to law." And, after all, the argument from statistics, intended to show that the uniformity on the whole which appears in physical movements is an average, seems to be an argument which modern physicists are inclined, on purely experimental grounds, to endorse.

In the second place, Ward maintained—and here, as in so many other parts of his work, his knowledge of biology served him in good stead—that by 'evolution' is not meant in modern science what the term literally implies, an unfolding of what is already involved. By 'evolution' the modern scientific man means what would be better expressed by the term 'epigenesis,' the formation by progressive integration of what is genuinely new. From the pluralistic point of view, evolution must imply synthesis, and real synthesis is always

¹ *The Idea of God*, p. 184, *sqq.*

creative synthesis. Just as the timbre of a musical note is more than the sum of its constituent tones, and a melody more than the sum of its separate notes, so, according to the Darwinian theory, a new organism is more than the unfolding of the sum of parts contained in the embryo. In it, those parts have been gradually organised in such a way that a product has resulted which was not preformed in the germ. Here, as likewise, of course, in reference to interaction, Ward's monadism differed markedly from that of Leibniz, which was dominated throughout by the thought of development as the gradual explicating of what is implicit from the first, a doctrine which, while appropriate to an absolutist philosophy, seemed to Ward hopelessly irreconcilable with pluralism. In short, by the conception of 'creative synthesis,' Ward meant, I take it, very much what Lloyd Morgan has since called 'emergence,'—the advent of new and, before the event, unpredictable characteristics. But it was, he thought, in the development of human society that evolution, in the sense of epigenesis, is most conspicuously manifested. What emerge there are not new entities but new values; these values not only tend to be conserved but to prepare the way for still higher unities and worthier ideals, and we can assign no limit to such process.

One of the problems which Ward's monadistic theory enabled him effectively to handle was the problem of the relation of body and mind. After the manner of Leibniz, he pictured an individual organism as consisting of a dominant monad in a special relation to a group of subordinate monads, the dominant monad constituting the 'mind' of the organism, the subordinate ones, although themselves inferior 'minds,' constituting the body. The subordinate monads he conceived to stand to the dominant monad in a functional relation as ministering subjects. This relation, while, in a way, analogous to that between an instrument and the worker who uses it, is yet essentially different from the latter relation, for, although the worker may become so accustomed to his instrument as to attend only to what it does and not to what it is, it yet remains an object for him. But the functional relation of the subordinate to the dominant monad is a relation not of object to subject but of subject to subject,—the kind of immediate *rapport* which is implied in what is called 'telepathy'. We can only gain some idea of the nature of this 'sympathetic *rapport*' from the illustrations we find of it 'writ large' in social institutions. The officials in the post-office are, of course, persons; but, in their official capacity, they subserve a function similar to that of subordinate monads,—the service

they render to the community is, for the ordinary citizen, the main concern. Neither in their personalities nor in the technical details of their work has he any interest; he confidently relies upon each bit of work of theirs being performed, and so long as everything proceeds smoothly, his attention can be confined to the things which through them he is made aware of. And in a like manner, the dominant monad may be conceived as being apprehensive *through means* of the subordinate monads of what lies beyond them; the subordinate monads as being diaphanous to the dominant monad and the 'things' of which they convey information as being to it opaque. The one relation is that of the intersubjective kind, the other of the kind we call cognitive. Not only so. We can understand, also, how, with increasing complexity of organisation, the process of mediation tends continually to increase, how functions originally controlled by the dominant monad devolve upon the subordinates, and how thus the range of habitual processes, which for the dominant monad lapse into subconscientness, widens and extends.

I revert, however, to the central thought. Given a world of originally independent psychical entities, each struggling for self-preservation, the problem had been to render intelligible the way in which these might organise themselves into such an orderly and connected whole as nature exhibits. And that problem, Ward claimed, had by no means proved itself to be intractable. On the contrary, the general lines along which its solution might be sought had been more or less successfully traced. But in trying to solve that problem, a characteristic set of other problems are thrown upon our hands which, from the standpoint of pluralism alone, obstinately resist solution. At both its upper and lower limits, namely, pluralism pure and simple leads to an *impasse*. (a) If, in the universe, there be, as science practically obliges us to think, innumerable orbs besides this small planet teeming with life, it is difficult, or rather impossible, to form any idea of how these could ever constitute a commonwealth; without some supreme Mind, the universe would remain a plurality of worlds, each isolated from the others, and no ultimate unity would be achievable. We might, it is true, in conformity with the principle of continuity, posit a higher order of intelligences, and thus be led on to conceive a Highest of all. Such a supreme Being would, however, only be one of the 'Many'; he would in no sense be absolute, nor could he be thought of as either the ground or the creator of the universe. (b) At the lower limit, the perplexity of a first beginning confronts us. As we trace the evolution of the

world back to its earliest conditions, we seem driven to suppose a vast multiplicity of 'slumbering monads,' to use the phrase of Leibniz; and the question arises as to how the awakening could ever be brought about. Since monads would all be so far homogeneous, we appear here to approach a pure potentiality, that would require a *Primum movens* to quicken it into life.

These considerations suffice of themselves to indicate that if the theistic postulate can be sustained pluralism would be relieved of just those difficulties that are for it the most formidable. Nor is that all. The course of the argument so far had been to show that in the economy of nature there is to be discerned a tendency to conserve the organic. But is there also to be discerned as operative therein a principle of the conservation of values, such as would prevent a rational self-conscious mind from lapsing back into a monad of inferior grade? If the monads be, as according to pluralism they are, ultimate realities, no one of them can, it is true, sink into nothingness. But a self-conscious monad is dependent upon a group of subordinate monads, and, when this group is as such dissolved, although the monad to which it has been subservient will persist as the same metaphysical entity, it by no means follows that it will persist as the same identical person. Moreover, this planet seems destined to enter, when a certain stage of its history has been reached, upon a period of inevitable decline, and that would appear to involve that the higher monads will revert to the condition of the lower. Progress, then, although guaranteed up to a certain point, would be *on the whole* precluded. "In a word, without such spiritual continuity as theism alone seems able to ensure, it looks as if a pluralistic world were condemned to a Sisyphean task. *Per aspera ad astra* may be its motto, but *facilis descensus Averno* seems to be its fate."

Both on theoretical and on practical grounds, pluralism, then, would appear to point beyond itself. But Ward would not admit that a pluralism that did not terminate in theism is necessarily self-contradictory. It would be, he thought, perfectly justifiable for a 'radical empiricist' to take the world as he finds it,—that is to say, as a plurality of individuals unified in and through their mutual intercourse—and to refuse to proceed further. Such a theory might leave us, as Lotze said, with an inexhaustible wonder, but then the universe *is* an inexhaustible wonder, and a wonder is not a contradiction. If, however, a pluralist does make the approach to theism, he will do so not with any idea of discarding his pluralism but with a view to complete it. And Ward's

contention was that theism does afford a means of providing pluralism with a supplement of which it stands in need—on the theoretical side, with an ultimate ground for the existence of the monads, such as reason seems to necessitate, and on the practical side with a unity of meaning or end such as the moral consciousness seems to demand.

In one respect, he allowed, theism introduces into pluralism an essential modification. God cannot be legitimately thought of as related to the 'Many' in a way resembling that in which any one of the 'Many' is related to any other. The 'Many' must be conceived as dependent upon God, and as existing somehow in and through God. The idea of 'creation' evidently occasioned Ward no small amount of trouble and uncertainty, but he handled it with considerable subtlety and skill. He had, indeed, already cleared away what would have proved an insurmountable obstacle to the line of thought followed by him; that is to say, he had no need to account for the coming into being of an inert matter. He felt himself justified, therefore, in at once dismissing the crude and contradictory notion of a 'making out of nothing,' and the almost equally contradictory notion of reality as having been brought into being. "If creation means anything, it means something so far involved in the divine essence that we are entitled to say as Hegel was fond of saying, that 'without the world God is not God'." In other words, the notion of 'cause' is, in this context, entirely inapplicable: creation is not to be brought under the category of transeunt causation, because that relates to change in existence, nor is it to be brought under the category of immanent causation, as being a change in God, because that would mean abandoning the position that God is God only as being creative. To speak, then, of God as the Creator of the world must be taken to signify that God is the *ratio essendi* of the world's being. On the other hand, however, the notion of ground is not to be interpreted as implying that the world is merely a way in which the Absolute comes to self-consciousness. The 'Many' no less than God must possess independent reality; from the pluralistic point of view, God can never be the Absolute, the only Absolute that pluralism can admit is that which God and the world would constitute. Creation, therefore, certainly involves limitation; in determining the world, God must likewise determine himself. But in determining himself, God is not to be thought of as differentiating or fractionating himself into the world. *How* God creates the world and thereby limits himself we cannot, by the very nature of the case, represent to ourselves; since we are *ex hypothesi* creatures,

to experience what the process of creation is like is obviously beyond our power. A faint and distant analogy may perchance be found in what we call the creations of genius, which we regard as the spontaneous output of a free spirit that embodies itself in its work. Though the man of genius loves his work and lives in it, he is still distinct from it and greater than it; and it too, though he knows it through and through, is distinct from him. The analogy fails, it is true, just where our real difficulties begin, for there is an impassable gulf between the origination of something relatively new within the world and the absolute creation of the world itself. Nevertheless, this difference need not imply utter disparity; there is nothing to prevent us applying to the divine experience the distinction of will and presentation and assuming that these are no less inseparable in such experience than they are in our own. There would, therefore, be no sudden resolve to create, followed by the carrying of the resolve into effect; divine creation can only be continuous creation. "If God is the ground of the world at all he is its ground always as an active, living Spirit, not as a merely everlasting, changeless and indifferent centre, round which it simply whirls."

The sort of notion that Ward was attempting to frame of creation comes out perhaps most clearly in his treatment of the problem of freedom and 'foreknowledge'. Creation, being *ex hypothesi* the calling into being of individual agents, centres of spontaneity, cannot, he argued, be a process of determining beforehand exactly what they shall be and do. "Unless creators are created nothing is really created." If there are to be creators other than God, then manifestly that does mean that God cannot be as though they were not; he must be limited and determined by them. Such limitation would be, however, essentially self-limitation; and if it be said that an omnipotent being could not thus limit himself, the reply is that such an assertion amounts to nothing short of a transparent contradiction in terms. Contingency in the world there must be if the world consists of conative agents, but it is ridiculous to confuse that contingency with chance; it is, on the contrary, the contingency from which the established order of the world has proceeded. It *does* imply that there are future facts outside the range of even omniscient knowledge. It *does* imply that to each created creator some measure of initiation has been assigned, though obviously not an unlimited initiative. But it does *not* imply that God will always be, or ever be, liable to surprises. The *total* possibilities may be fixed, but within this totality, any particular

possibility will be open. Otherwise, instead of becoming intelligible, history would turn out to be essentially unintelligible; a world in which every event was predestined would both necessitate a rational ground and be irreconcilable with one.

The problems for which human reason ordinarily seeks to find a solution through the ideas of God, freedom and immortality are, as Ward felt very vividly, real problems, problems which are put by reason itself, and in respect to which, therefore, we may be sure that a solution sufficient in itself, though not perhaps sufficient in the way we may chance to desire, is to be had. With one of them—that of freedom—Ward held that our thought is fully competent to deal. The problem had, no doubt, often been wrongly stated. The phrase 'freedom of the will' was, for example, thoroughly misleading. There is no will that wills but only an individual subject that wills, and the real question was whether in willing an individual subject is free. But, in Ward's view, freedom is a psychological fact. That the fact had often been misconstrued—as, for instance, when it is represented as the 'liberty of indifference'—he was, again, ready to admit; but any metaphysical theory that allowed no place for the fact or attempted to explain it away seemed to him, through that very circumstance, to betray its falsity. On the other hand, the existence of a personal God and of a life hereafter we could not, he urged, demonstrate as truths of knowledge. Here we were thrown back upon faith, and the important thing was to see wherein faith and knowledge differ, as also how they are related. The source of faith lies, he insisted, in our conative nature; had we no need of God we should never seek him, were life not dear to us we should never look beyond the grave. But the cause on which the existence of knowing as a fact depends, if not the source from which knowledge proceeds, is likewise our conative nature. We acquire knowledge by merely doing, and we acquire it solely by doing; experience is the process of becoming expert by experiment. From first to last experience exhibits as operative in it throughout a sort of unscientific trustfulness, which ultimately either justifies itself or fails to do so at the bar of the critical intellect. It is only in striving for what is good that we learn what is true; and it is only because we are interested in the 'why' that we inquire about the 'what'. So far, there is nothing unique in religious faith at all; it is just the crowning phase of a long and ascending series. Science rests, in the long run, upon a postulate that is but methodised 'primitive credulity'; its real categories—substance, cause,

and end—are anthropomorphic in character, projections of ourselves. If, then, through the limitations of our knowledge, we cannot scientifically verify the fundamental beliefs of religion, what recourse is left to us? Only that, Ward answered, of testing them by their success or failure. And here the universality, the survival of religion, its advance with the increasing morality and intelligence of mankind, to say nothing of the way in which it has largely furthered such advance, is surely, he contended, a strong argument in its support. We can only 'justify' faith in God and immortality by demonstrating its worth in the living experience of the believing subject. For philosophy, there remains, however, the task of deciding whether such faith is or is not more in accord with the postulate of the unity and rationality of all experience than its opposite can possibly be. Does philosophic reflection force us to recognise that nature becomes intelligible only if the knower and the known are not utterly disparate, but that they alike rest upon one ultimate ground? Does it find that evolution becomes intelligible, only if 'the groaning and travailing of the whole creation' is not doomed to be forever subjected to vanity? If so, though it has not shown that these propositions of faith are true, it *has* shown that it is rational and reasonable to believe in their truth.

Here I may bring my task to an end. Ward was in the habit of describing his philosophy as idealistic or spiritualistic, meaning thereby that it was an attempt to interpret the world in terms of Mind. But it was an idealism that remained throughout on an empirical basis.

III.—THE RELATION BETWEEN KNOWING AND ITS OBJECT (II.).

BY A. C. EWING.

IN the earlier part of this article, published in the April number of *MIND*, I tried to defend the view that knowing is internally related to its object against the usual criticism that, if so, knowing would change its object. Perhaps I should have done well to stop there, but it is tempting to follow up a purely defensive support of this view with an attempt to establish it by positive arguments and not merely to secure it against objections. This is usually done by means of a general theory of relations, *e.g.*, to the effect that a merely external relation could not relate anything, but it seems to me that apart from any such general theory there are certain arguments peculiar to, or at least specially applicable to, the case of cognition, which strongly support the view that the relation involved is internal in one very important sense of the term. For in the earlier part of the article I pointed out that "internal relation" may have at least four different meanings.

1. A relation such that if either related term were different in a way affecting the relation the other would likewise be different, or a relation that makes a difference to its terms.
2. A relation such that from one related term the other term follows logically or *a priori* (directly or indirectly).
3. A relation essential to its terms.
4. A relation that falls within the nature of the related terms.

The arguments that I shall give are intended to support the view that the relation involved in cognition and belief is "internal" in the first of the senses given, or that the object known, believed in or thought about, would have been different if it had not been known, etc. With the other three senses we are not concerned here, and I hope it will be quite clear that in contending that the relation involved is internal in this sense I am not contending that it is specially important for its terms—it may be extremely unimportant. Nor am I

arguing for any kind of "idealism"; on the contrary, in the earlier part of my article I tried to reconcile this view of the cognitive relation with a realist theory of knowledge and to oppose one important argument for idealism; but on the other hand I think the view which condemns all "idealist" and "coherence" theories off-hand on the ground that knowing implies the absolute externality of the knowing relation is not a tenable one. In particular I do not think it can be rightly urged that the relation involved in knowing must be purely external, a premiss from which the denial of the view that all relations are internal and the consequent denial of the view of reality as a "coherent" whole have been deduced.

I shall confine myself to a consideration of the cognitive relation taken alone. Although one can hardly hope to arrive at any final conclusion about even the cognitive relation itself without reference to the more general question, a consideration of this relation by itself may perhaps throw a little light on the problem. For, if it is true that a question about a particular kind of relation cannot be answered adequately except in conjunction with a theory of relations in general, it is equally true that it is very dangerous to rely entirely on arguments drawn from the nature of relations as such without investigating the nature of the special relation in question more closely, at least in the case of such a unique and important relation as the one we are now discussing.

It is perhaps needless to say that in asking whether knowing and its object are internally related in the first sense of the term, I am *not* merely asking whether, when it comes to be known by me, A acquires the relational property of being known by me. That it does so is obvious enough, but it does not necessarily follow from this that A is different in other respects also from what it would have been if I had never come to know it. The question is not whether A acquires a new relational property in being known by me, but whether this relational property is internally connected with other properties of A in such a way that A in itself, as it originally was, would have been different if it had not been the case that A was going to be known by me, and so acquire this new relational property or stand in this new relation.

In this investigation it seems necessary to distinguish the two aspects of all cognitive attitudes. There is always a distinction between the assertion that I think so-and-so and the assertion (much more doubtful, alas!) that I am right. This distinction is obvious enough in the case of belief,

opinion, error, and indeed of judgment in general, but it tends to be obscured in the case of "knowing". This is because the phrase, "I know," implies both (1) that I think¹ with certainty (subjective), *e.g.*, that S is P, (2) that my thought is right.² For knowledge (in the strict sense of the term) to occur, both conditions must be realised. If only (1) is realised we have error, if only (2) an accidental coincidence, a lucky guess or a probable opinion that turned out right. Even if subjective certainty invariably involved the rightness of the judgment made, the fact that I was certain about it would still not be the same as the fact that it was right. The fact that I think with certainty is, primarily at least, a fact about my subjective state, the fact that my thought¹ is right refers primarily to the object, or rather to a relation between my thought and the object. For the person who makes it, indeed, the judgment—I think with certainty that S is P—is for most purposes equivalent to the judgment—S is P—and so to the judgment that my thought is right, because, if I think with certainty that S is P, I thereby judge, mentally at least, that S is P, and so, that my thought is right. But for somebody else, or for myself at a different time, the judgment that I think, or thought, with certainty that S is P may seem very far removed from the judgment that S is P, and so from the judgment that my thought is (or was) right.

Now let us treat these two factors separately. What about the first, my thought that S is P, the subjective factor? This may be treated as a natural event in time of the psychological order, it is not itself a relation between me and the object of knowledge and is not a fact about the object as such but a fact about myself. How is it then related to the object? Are it and the object of knowledge internally related in the first sense of the term, "internal"? "Internal relation" in this sense has been defined as meaning a relation that "makes a difference to" its terms. It is a relation such that the related terms are different from what they would be

¹ "Think" and "thought" are not used here in any sense in which they are opposed to "knowing," but as the most general words that I could think of to cover the subjective side of the cognitive relation. I am aware that this terminology is liable to criticism but can find no less unsuitable word. There are objections to the use of "judgment" in this sense, and we do not talk of "apprehensions" or "cognitions" being "right". We need a term that covers both opinion and knowledge.

² This is not intended as a definition of knowledge, far from it. Whether knowledge is definable or indefinable, it surely must be admitted that it somehow involves these two elements, aspects, or whatever else you choose to call them.

apart from the relation.¹ Of such a relation the typical instance is causality. It is sometimes indeed denied that causality is an internal relation, but what is repudiated there is not the first but the second sense of "internal relation" as applied to causality, *i.e.*, it is denied that causality is logically intelligible in principle or that the effect follows with *logical* necessity from the cause. I do not see how it could be denied that causality makes a difference to something standing in the causal relation, it would not be causality if the cause did not make a difference to that in which it produces effects. But, even in the case of causality, the phrase, "make a difference to," must be applied with care. While there can be no doubt that the relation of causality always makes a difference to objects standing in that relation, we should hesitate to say that the effect makes a difference to its cause,² because "makes a difference" seems to imply a causal action by the effect on its own cause. We cannot say that the effect makes a difference to its cause if by "make a difference" is meant "cause a difference"; we can only say that the effect "makes a difference to" (or "determines") its cause in the sense that the cause must be different from what it would have been if it had not produced its effect and in the sense that we can infer facts about the cause from its causal relation to the effect. We have seen that a similar position arises in regard to knowledge; we cannot say that knowing makes a difference to its object if we mean by "make a difference" "cause a difference," but we may perhaps still be able to say, (1) the object of knowledge makes a difference to the experience of knowing, (2) the object of knowledge would have been different if it had not been known, and different not only in the relational property of being known but in other respects also.

Now it seems to follow logically that, if it is the case that *a* must make a difference, *b*, it must also be the case that the absence of *b* would imply the absence of *a* in its original form (other conditions remaining the same). So much follows from the ordinary logical rules of hypothetical judgment. To say that *a* must make a difference, *b*, is to say—If *a*, then *b*,—which involves the conclusion—if not

¹ *I.e.*, intrinsically different, and not only different in respect of the property of being in that relation.

² We also might hesitate to say that the cause "makes a difference to" its effect, but only on the ground that the expression does not go far enough and should be replaced by "determines" or "produces," since the effect owes its whole nature and not only certain modifications of itself to the cause.

b, then not *a*. Now this is of importance for our question, because, while it seems easy enough to deny that the object of knowledge would have been different if it had not been known, it is clearly far from easy to deny that the object of knowledge makes a difference to the knowing it. Yet, if my contention be right, the only consistent course for those who deny the former proposition is to deny the latter too. This is obscured by the fact that in any case the object known is not *the only* factor which determines the knowing experience, and that, consequently, a difference in the latter might always be due, or partly due, to factors other than the object known. This would still be the case, even if it be true that some difference is always made by the object known. In view of this we are obliged to add the reservation, "other conditions remaining the same," a reservation which in strict *a priori* reasoning would not be needed. But it still remains quite true that, if the object of knowledge makes a difference to the knowing of it, it must follow that, other conditions remaining the same, the known object would, if not known, be different. In this respect the relation involved in knowledge is only in the same position as causality which, as we have seen, must be an internal relation in the first sense of the term, "internal".

We can press this parallel further: if the object known is one of the factors which determine the knowing experience,—and it seems almost impossible to deny that it is—it is in the same position, so far, as any part of the total cause of the latter. Any part of its total cause makes a difference to it, helps to determine it, yet we can only say of any part of the total cause that, if its effect were different, it would be different, provided we add the reservation, "other conditions remaining the same," or similar words. This means that in all cases of causality which we can know, believe or imagine, this reservation must be added, for in no case can we know the total cause, always only the most important part-causes. Yet causality is clearly an internal relation in the sense at issue, it does make a difference, it does determine, otherwise it would not be causality. We may see the point in another slightly different way. Let A stand for the *sum-total* of the factors which determine B, whether causally or in any other way in which we might conceive, *e.g.*, a universal law to determine the knowing of it. In any such case B follows necessarily on A, and therefore A could not have been what it was without B following on it. Hence we can certainly say that, if B had

never occurred, A would have necessarily been different, and therefore that A and B are internally related to each other in the sense at issue. But surely it is impossible to say that A and B are internally related to each other and yet that none of their parts are. The parts of A which help to determine B must also be internally related with at least something in B. So, if we can show that the object known or believed is one of the factors in determining our experience of knowing or believing, it seems to follow that they are internally related like a part-cause and the effect which the latter helps to produce, and that we have a right to say that the object known or believed would have been different if it had not been known or believed, unless other factors had also been different in such a way as just to counteract the first difference.

We can then only maintain the external relation view at the price of denying that the object known has in any case any influence on the experience of knowing it. In other words, if knowing and its object are only externally related, I must be able to know A without A having any influence whatever on my experience of knowing it or on my ideas of it. It follows that, when I know A, A might just as well be something else without my experience of knowing being in the least different, and that in knowing A my ideas might vary quite irrespective of what A is. This is surely a *reductio ad absurdum* of the view, but I think it is worth while to consider this point further with the help of examples. We may say in general, I think, that, in so far as our knowledge is genuine knowledge, our ideas or judgments, and so our experience of knowing, must vary with the object known, so that, if the object were different, they would also be different and *vice versa*. For, if they varied irrespective of the object, they might just as well be false and would be at the most only accidentally true. And, similarly, any belief or opinion that we hold about A must vary with A just in so far as it is right. What is it, *e.g.*, that determines in the main my thought or cognition that there is a book in front of me? Surely the book itself in so far as my cognition is just a cognition of the book, or whatever the idealist (or realist) may mean by the physical book. If it were not determined by this, I should be suffering from a delusion. And this is clearly the answer that must be given in all cases of knowledge by perception (including introspection and memory). A similar answer must be given in the case of any so-called immediate knowledge. If I apprehend "immediately" that $2 + 2 = 4$ or that a particular landscape is beautiful, my cognition must presumably

be determined in the one case by the truth that $2 + 2 = 4$, in the other by the nature of the landscape itself. But what about indirect, inferential knowledge, or opinion based on "probable arguments"? When I accept something as true on hearsay evidence, what determines me to do so? The fact believed is here not indeed the immediate cause of my belief, but it still may be an indirect cause. Thus I have not observed the battle of Waterloo, so the battle is not an immediate cause of my belief in its occurrence. Nor have I investigated the evidence for it first-hand. How then do I for all practical purposes know that the battle took place? Because my belief in its occurrence is determined by the agreement of historians on the subject. But what is this agreement determined by? Surely in the last resort by the occurrence of the battle itself. At least, if it could be shown that the occurrence of the battle had no share in determining the agreement of historians on the subject, their agreement would cease to be a ground from which we could infer with any probability that the battle took place. In all cases where we accept evidence as true we must regard that evidence as determined by the event reported and so believed in, and not, *e.g.*, by a desire for selfish gain on the part of the witnesses or by a different event which they mistakenly supposed to be of the kind described by them. So we must regard the event believed as ultimately determining our own belief.

However there are many cases in which it is not possible to regard what is known as a *cause*, even indirect, of our knowing it, and similarly with belief or opinion. We cannot so regard it in the case of opinion about the future, nor in the case of knowledge of universal truths. But we can say this at least, that in all cases of knowledge or right opinion our thought or belief must be determined ultimately either (1) by the object of knowledge (or opinion) itself, or (2) by a ground from which at any rate the probability of this object can be validly inferred. Thus our thought is internally related either (1) to what is known (or believed), or (2) to its ground, and (2) comes to the same thing as (1), since its ground must be internally related to it. I must add that in saying "determined" I do not mean "caused". For a universal truth may surely determine my thought in knowing it, yet it cannot be a cause. Nor do I mean that the object or its ground is the only factor in determining our knowledge or belief. Clearly this is not so, but if it is even just *one* factor in determining it, we have as much right to say that the relation is internal as we have to say that causality is an internal relation. At any rate we can say, as

we did in the case of causality, that, if my thought had been different, the object known or believed, since it was one factor in determining my thought, would, other conditions remaining the same, also have been different. But we can go further and say also that, in so far as our cognition or thought of A is true knowledge or right opinion, it must vary according to A, and that, therefore, if it had been different, A would, in so far as it was true cognition or right opinion, also have been different. Our thought may vary in some respects in accordance with other factors: thus the images I use may vary more or less independently of the fact believed or known; but, in so far as my belief or thought is right, it cannot vary in those respects in which it expresses truth unless the object varies also. My belief may remain unaltered, or practically unaltered, while my way of expressing it varies, but in so far as there is any change in my belief as a belief, it is falsified unless the change is strictly in accord with the nature of the object. If I enlarge or change my concept of A irrespective of the nature of A or from grounds irrelevant to A, I am in error or merely imagining. My belief, in order to be right, must be in accord with the nature of its object; in knowing an object my thought must conform to the nature of that object and not to my own likings and imaginations. This relation must be regarded as in some degree reciprocal; we have seen that we cannot admit that the object determines our experience of cognition and yet deny that apart from the cognition the object must have been in some respect different. We can say—In so far as we are right, if A is, we think A; and, therefore, we can add—In so far as we are right, if we do not think A, A is not.

It may seem absurd to suggest that, *e.g.*, the French Revolution would have been different if I had not come to know it. But is that stranger than what is implied in the ordinary scientific view that all physical events are causally connected? For we have seen that if two events are causally connected we must say that, if one were different, the other also would be, in the same sense as we can say that in regard to the relation between knowing and the object of knowledge. It may seem still more absurd to suggest that the law of non-contradiction is different from what it would have been if I had not come to know it, but is this more absurd than the undoubted truth that the law of non-contradiction could not be true in its present form if I or any other particular really did not conform to it, if any particular really were both B and not-B at the same time and in the same sense of B? Also we must remember that we can only

say that, if I had not come to know it, the law of non-contradiction or any other object of knowledge would have been different, provided we add the reservation, "all other conditions remaining unchanged," or provided we mean that, if I had really *known* it and known it as different, it would have been different.

But what about the second aspect of knowing or believing? "I know that S is P" means something more than "I think with certainty that S is P," it means also that I am right in this. So we have another relation between knowing and its object, namely the relation involved in rightness. Similarly belief or opinion is right only through standing in this relation to its object. It is this relation to which the term, "correspondence," is often applied. I am well aware that it is frequently denied that truth depends on such a relation to its object and maintained that it consists in the relation of coherence with other truths and not with objects separable from our judgments, but there is no need to discuss that position here. For coherence is obviously an internal relation, at least a relation without which its terms would be different, and the coherence view as a whole involves a complete repudiation of the doctrine that the cognitive relation is external. The doctrine of external relations has quite a different metaphysical background and depends on a sharp distinction between truth and fact such as an advocate of the coherence theory would decline to make.

If we are right in our previous contentions, indeed, the object of knowledge or belief and our experience of knowing or believing must be internally related, but it might still be maintained that the relation of correspondence was the specific cognitive relation and that this was essentially external. It might be admitted that the object known would have been different apart from the knowing of it, but asserted that the difference could not be connected with the specifically cognitive relation itself, that both the experience of knowing and the object of knowledge were unaffected by the relation of correspondence between them. It might be said that this relation of correspondence was the only direct relation between knowing *qua* knowing and the object known, and that, although knowing might be internally related to its object in an indirect fashion, it was implied in the very nature of knowing that the direct relation between it and its object must be external and not in any sense internal. I think this argument derives a great deal of its plausibility from the identification of "being internally related to" and "causing a change in," but even when the fallacy of this identification had been admitted it might be urged.

On examination, however, the argument seems to reveal a character that can only be described as distinctly suspicious. The argument is that it is implied in the very nature of knowing *qua* knowing that the object of knowledge is independent of the cognitive relation in question. But, since the "independence" alleged must mean, if it is to prove the point, that the fact of knowing as such implies nothing in the object, we have the curious paradox that knowing *qua* knowing implies that nothing in the object is implied by knowing *qua* knowing. Or, in other words, it follows from the very nature of knowing that the object of knowledge has a quality by virtue of which no quality which it has follows from knowing. Is this not perilously near self-contradiction? Yet, unless we say that this "independence" is implied in the nature of knowing, the ground for making the relation external seems to disappear. It is indeed true that knowledge of anything is essentially knowledge of it as it is and not as different from what it is, but I do not see at present any way in which an argument based on this fact can be worded so as to prove that the knowing relation is not internal. To say that we know A as it is and not as different from what it is is not the same as saying that A is not different from what it would be if we had never known it.

If we examine the relation of correspondence or the relation involved in rightness, our suspicions are increased. For can a relation be called external in the sense required, if from one term and the relation you can infer the other term or anything about the other term beyond the fact that it stands in that relation? But from the fact that I think that S is P and the fact that my thought is right, or that it corresponds to the reality of S, you can surely infer that S is P, *i.e.*, from the one term and the relation of correspondence you can infer something about the other term over and above the fact that it is in the relation described to our thought or cognition of it. Similarly, from the fact that S is P and from the fact that my thought on the subject corresponds to (stands in the relation of correspondence with) reality, surely we can infer something about the nature of my thought, namely that I think S is P. Not only is it the case that the object of knowledge would be different, if the experience of knowing or right belief were, but it seems also to be the case that the fact that it would be different could be deduced from the correspondence irrespective of other relations, and this is surely fatal to the view that the correspondence relation is external. From the premises—"I know, think or believe S to be P," and "my belief or

thought corresponds"—we could deduce that, if S were not P, either my belief or thought would have to be different or the relation of correspondence would disappear. Again from the premises—"S is P," and "I have a corresponding belief or cognition"—we could deduce that I must believe S to be P, and could not believe S to be Q without either S being Q or the relation of correspondence being lost. We can say that, if my thought or belief corresponds to S, it could not change from a thought or belief that S is P to a thought or belief that S is Q without S itself being different. For, if S were not different, the belief or thought that S was Q would be wrong and so would not correspond to S. So if such a relation as correspondence is to be admitted at all, it would seem that it cannot be external in the sense required. But, if there is no such relation, it certainly cannot be external, and we have been unable to find any other relation involved in cognition that could claim to be external. A special consideration of the relations in question thus leads us provisionally to declare them internal in the first sense of the term, "internal".

Whether knowing (or believing etc.) and its object are internally related in the second sense also, in the sense in which "internal relation" means or involves logical *a priori* connexion, we shall not ask here. What answer should be given will depend to a considerable extent on one's view of causality. If we hold that causality is mere brute fact, unintelligible on principle not only to our minds but to any mind, there will be little room left in the world for "intelligibility" and so for any logical relation between existents; if we hold that causality is an *a priori*, and so ultimately intelligible, relation, then there will be a real logical nexus between everything causally related and so between all existents.

IV.—*THE PROBLEM OF REAL AND IDEAL IN THE PHENOMENOLOGY OF HUSSERL.¹

BY W. R. BOYCE GIBSON.

EDMUND HUSSERL is one of those profound and pitiless thinkers whose strenuous thinking with its penetrating precision and its genius for fundamentals attracts the best kind of disciple and creates a School. The most casual acquaintance with the *Annual for Philosophy and Phenomenological Research*, edited by Husserl himself, will show

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¹The main work of Edmund Husserl will be found concentrated in two volumes, the "*Logische Untersuchungen*" including the important *Prolegomena zur Reinen Logik*, and the Article with which the first issue of the "*Jahrbuch für Philosophie und phänomenologische Forschung*" opens, entitled "*Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie.*" In the "*Studies*" we have the *Logie* and the *Transition from Logic to Phenomenology*. In the "*Ideas*" we have the *Phenomenology* itself.

The first edition of the *Logical Studies* was published in 1900, the main part of the second edition following in 1913, the very year in which the "*Ideas*" appeared. The last instalment of the second edition of the *Studies* did not appear however till 1921. My own reading of the *Studies* has been done wholly from the second edition. The essential difference between the two editions springs from the fact that in the interval between 1900 and 1913 Husserl had thought out his *Phenomenology*, so that the studies in their new form bear the phenomenological impress. They were revised in the light of the new insight. Thus the fundamental character of Husserl's work as a whole is phenomenological. The work in *Pure Logic*, important as it is, is none the less subsidiary. The presence of this twofold inspiration in Husserl's work—the pure logical, on the one hand, and the phenomenological, on the other—becomes intelligible in the light of Husserl's own development. The impulse to the *Logical Studies*, so he tells us, was provided by his own reflections on the *Philosophy of Arithmetic*. He had written a weighty tome on that subject under the conviction that the philosophical bases of mathematics and of *Logic* were to be sought in *Psychology*. Part I of this *Arithmetical Philosophy* had already been published when he became convinced that the roots of *Arithmetic* lay not in *Psychology* but in *Logic* itself. Like a good convert he put away his *Mathematical Philosophy* till

what a vigorous and progressive School it actually is. The first issue in 1913 opens with what Husserl modestly refers to as his *Ideas on Pure Phenomenology*, an Article packed with compressed matter and covering just 323 pages. One of the contentions of the Article is that Phenomenology is the basic Critical Science, the propaedeutic not only to every future Metaphysic but to every future Psychology, Geometry or other Science. It is the science that deals with origins and fundamentals of every kind, and the articles of the five succeeding issues of the *Annual* are mainly concerned with pioneering work down among the substructures of the various disciplines. The most recent issue available, the *Annual* for 1923, deals in this spirit with two such widely differing themes as Sociology and Geometry, while a typical Article on a smaller scale—only fifty pages in length—deals with the conditions on which Deductive Theory depends for its very possibility. One can hardly fail to be impressed with the work and prospects of this great phenomenological School: with its viewpoint and programme, its analytic strength, its depth of insight, and, certainly not least, with the marked ability and enthusiastic devotion of the band of workers who are uniting to-day under the phenomenological banner. It is as though a new Pythagorean community had come to infuse into Philosophy a new spirit of thoroughness and intellectual discipline. This is of good augury for the happier relations between Philosophy and Science. There have been many indications in recent years of a growth of sympathetic understanding between these two great branches of knowledge. Men like Russell and Whitehead, on the one hand, and Bergson on the other, have shown how much can be done when scientific detail work is mastered in a philosophical spirit. Phenomenology promises to do more in this direction than any other of our modern movements. It faces the real difficulties. Instead of declaring war against subjectivity, as the New Realists have done, the phenomenologist makes the realm of Pure Consciousness his central abode, and sets himself to master its intricacies and

he felt qualified to recast it in the light of the new idea. He had become convinced of two things: (i) that the logical structure of Mathematical Science was grounded not in Psychology but in a deeper Logic, the transcendental Science of Pure Logic; (ii) that Psychology itself had its last root, and in a certain sense Pure Logic also, in a still more fundamental Science, the new and unexplored Science of Pure Phenomenology. In this twofold conviction we have the two main streams of tendency in Husserl's work: the earlier one flowing in the direction of Pure Logic, the latter, which is also the broader and the fuller and the deeper-lying flowing towards Phenomenology.

analyse away its traditional vagueness. I do not indeed believe that scientists and philosophers will ever meet on Phenomenology as on a common ground. Phenomenology lies too close to philosophy for that. We can hardly expect physicists and biologists to track the essential inspirations of their respective subjects to Husserl's analyses of Pure Consciousness. The attempt would involve so complete a change in viewpoint and method as to deter all but the veriest elect from the venture. My point is rather that Phenomenology encourages its devotees to become proficient in one or more of the Standard Sciences as a condition for getting into true exploratory touch with its ultimate foundations in the mind of man; and, on the other hand, it encourages advances from the scientific side by the spirit of rigour and minute enquiry which characterises all its analyses. Let all scientists who are inclined to carp at the vagueness of Philosophy devote some hour of their relaxation to the dream-work of Phenomenology. They will rejoice to find it as precise as their own subject is exact.

Husserl's work is rich in significant problems. We propose to fasten on one of these, the most central perhaps of all of them, the problem of the relation of real to ideal within his particular system. Husserl's contention is that the two main orders of real fact and ideal essence are intrinsically separate, and that the ultimate science of all is an *a priori* Science of Pure Experience which has no concern whatsoever with existing realities, but deals solely with essences. If this contention can be justified Phenomenology will be more fundamental than Metaphysics, the Science of Ultimate Reality, and all future Metaphysics will have to conform to its requirements.

A few words of preliminary explanation may here be in place. Husserl distinguishes in effect three main types of Object with which a Science may have to do. There is, in the first place, the real object or thing, the object with whose nature the natural and physical Sciences are concerned. There is, in the second place, what Husserl, in contradistinction to the real, natural object, calls the non-real or "irreal" object. Irreal objects are perfectly definite forms of Being. We shall see that all transcendently purified experiences are objects of this kind and possess Being, Individual Being of this irreal type. Then thirdly, there is the Essence, what Husserl calls "*Wesen*." Phenomenology is exclusively concerned with *pure* essences, more particularly with the essential nature of that irreal form of Being he calls Pure Consciousness. These Essences are

however, on his view, quite genuine objects, perceivable through a special kind of Intuition, which Husserl, in opposition to Sensory Intuition, calls Essential or Categorical Intuition, a form of intuition peculiar to Phenomenology.

The one point we propose to try to fixate for consideration is the question whether in the last resort it is possible, as Husserl would have it, completely to separate this doctrine of the *essential* nature of Pure Consciousness from the metaphysics of Pure Consciousness which deals directly with the *Being* of what is irreal; and whether, if this is not the case, the last word in the Science of the Unconditioned does not lie with Metaphysics rather than with Phenomenology.

The source of the hard and fast distinction which Husserl draws between reality and essence lies in his important conception of a Pure Logic of ideas or meanings, wholly independent of Psychology as a science of psychic reality. Psychology deals with actual, concrete mental processes, with psychical facts. Pure Logic, the Science of Science, the Theory of Theory, deals exclusively with pure meanings in their logical inter-relations, *i.e.*, with pure ideal contents only. The common failure to recognise this is due to a confusion of Pure Logic with Normative or Regulative Logic. The latter as a methodology of thinking certainly does stand in very close relation to the thinking processes which it seeks to control. It presupposes a certain psychological knowledge of these processes, and to that extent Logic, as a regulative discipline, does presuppose Psychology. This is not to say that Logic presupposes Psychology in the sense in which the branch presupposes the main stem. We cannot say of Normative Logic that it is a *branch* of Psychology. A Science whose laws of thought are ideal laws of intelligibility is of a different order from one whose laws of thought are causal laws of actual thinking. It is a mistake to suppose that even Normative Logic is essentially, intrinsically dependent on Psychology. This is not the case. Normative Logic, it is true, rests on a purely theoretical science for its essential support, but that science is not Psychology, but Pure Logic, a science whose subject-matter is not any order of fact or reality but the purely ideal world of Theory itself. Pure Logic is the theory of theory, the science of science. Clearly such a discipline is needed. Every science presupposes the validity of the notion of Science itself, and therefore of all the implied notions of truth, proposition, subject, predicate, object, property, relation, and so forth. A critical survey of the very notion of science itself and all its implications would constitute a fundamental standard for intelligibility in scientific enquiry. Any state-

ment which contradicted the findings of such a science could be set down as self-defeating and absurd. For it would be uniting the claim to be scientific with a repudiation of the scientific idea. Now this Pure Logic deals wholly and exclusively with ideas and has no connexion at all with facts or realities. And so far, I think, there are many who would agree with Husserl that this science whose concern is Order and Meaning as such, dealing as it does with rational possibilities only and not in any sense with empirical actualities of a contingent kind, is quite characteristically and distinctively an *a priori* science, a science of the conditions on which the very intelligibility of science itself depends.

Having thus fixed in principle the independence of ideas and ideal relationships from all admixture with fact, and having created Pure Logic as a Science whose concern is solely with the ideal, Husserl proceeds to his special studies in Pure Logic, and in the course of the very first of these, which deals with meaning and its expression, meets a crucial difficulty to which, with his characteristic thoroughness, he devotes the fullest attention. There is an important class of meanings which fluctuate, or shift their sense with every change in context or speaker: meanings such as "I" and "here" and "this." Is it possible to give to such words a purely ideal meaning, essentially independent of all existence? If not, it would appear that there is at any rate one class of meanings whose very intelligibility depends on the interpretation contributed by matter of fact, and the realms of meaning and of fact are to this extent intrinsically interdependent.

Husserl starts the discussion by classing expressions under two main heads: (i) those expressions in which the specified content partially reveals the subjective condition of the speaker; (ii) those expressions in which the specified content gives no such revelation at all. As examples of (i) we have the propositions which express wishes, commands, or questions. "Please give me a time-table," "Be so good as not to bang the door," express wishes and indicate to the hearer the speaker's feeling at the moment. But the statement 'Twice two are four' does not reveal or betray any subjective attitudes, though if it had taken the form "I judge that twice two are four," the subjective disclosure of my judging would have been expressly given, and would have formed part of the specified content of the assertion.

It is then typical of expressions under the first head that their meaning fluctuates, varying with the case in question. "I wish you luck!" fluctuates in meaning with the changes in "I" and "You." Husserl refers to these expressions as

intrinsically occasional expressions, and contrasts them with purely objective expressions which contain no such inevitable ground of fluctuation. All theoretical expressions, expressions utilised in the proofs and theories of exact science, are essentially objective and do not fluctuate in meaning.

Every expression which includes a personal pronoun is intrinsically occasional. If instead of the statement "I am glad," we substitute "The one who is now speaking and indicating himself is glad," not only is the substitution inadequate for it might apply to others as well as to myself, but we do not get rid of the occasional element which has simply been shifted from the "I" to the "now." It is the general meaning-function of the word "I" to indicate "the one who is now speaking," but this meaning is in no sense conceptually self-contained. So again the hearer will take the spoken word "I" as a sign that the person who is speaking it is making himself the immediate subject of his talk. But it is the concrete situation alone which can decide who the speaker is. Until the hearer knows this, he is ignorant of that part of the meaning of "I" which, to the speaker, is fundamental. Similar considerations apply to demonstratives. The word "this" at once assures the hearer that the speaker is referring to something in his own field of intuition or thought to which he wishes the hearer's attention to be drawn. Given the concrete conditions, the particular indication, coupled with the universal meaning of indicating something or other, suffices to make the meaning clear. Other intrinsically occasional expressions are "here," "there," "above," "below," "at present," "yesterday," "afterwards," etc. "Here" denotes the vaguely defined spatial surroundings of the speaker, but its meaning is not completed apart from the individualising conditions of the concrete situation. Over and above the general reference to a place in general, there is the particularising reference made possible only through the concrete conditions.

The intrinsically occasional character extends to all expressions which contain as part of themselves an intrinsically occasional meaning, to all expressions, therefore, for direct perceptions, convictions, doubts, wishes, hopes, fears, commands, etc. Even the definite article "the" may also have the singularising function which the 'intrinsically occasional' demands. Thus, "fetch me the lamp" means "Fetch me that particular lamp which we always light up about this time." Impersonals show this subjective fluctuation despite their apparent objectivity. "It rains" means "It is raining here and now." So too, exclamations such as

"Get away!" or "Come along!" need the concrete situation to fulfil their meaning.

This all suggests the crucial question: "How is this admitted fluctuation of meaning compatible with Husserl's view of meanings as fixed ideal unities?" Husserl suggests that the fluctuation belongs not to the meaning itself but to the act of indicating it.¹ But if so, why refer to the meanings themselves as *intrinsically* occasional? And how is it possible to maintain, as he does, that *all* meanings are ideally fixed, that a meaning which changes is absurd, or again that every subjective expression can be replaced by an equivalent objective expression? This is precisely what is out of the question. No amount of description can give the full meaning of "I," not even with the aid of other occasional meanings such as "now" or "here" or "this." Besides how can what is admitted to be intrinsically occasional be intrinsically unchangeable! Husserl is in a difficult position. After developing the theory of the intrinsically occasional in an exceptionally illuminating way, he still abides by the persuasion that all meanings must be ideal and that the very notion of a meaning which changes is absurd.

In the introduction to the second edition of his work, Husserl points with evident depreciation to the treatment given to "occasional meanings" in the Section we have just been considering. He refers to the purely preparatory character of this first of the six Logical Studies, and to the special treatment of occasional meanings in particular as a *tour de force* (Gewaltstreich) thrust upon him as a consequence of his inadequate grasp of the meaning of "essential truth" at the time he wrote the Studies. Briefly, the first Study is pre-phenomenological, so that we have now to see how, if at all, Husserl's Phenomenology meets and solves the difficulty raised by the first of the Studies.

Phenomenology, as Husserl conceives it, is a deeper-reaching science than Pure Logic. It is not a mere science of meaning, as Logic is, but a science of Experience. More specifically, it is "a pure [a priori] doctrine of Experiences in their essential aspect." Husserl's Phenomenology is to consist of three books of which only the first has so far been published. In this first book we find developed his peculiar method for isolating Pure Consciousness, and, in addition, the fundamental analyses of these same essential meanings as derived by that method. Let us turn then to the method to see what light it casts on the difficulty we are considering and

¹ First Study, § 28.

whether this Science of Pure Essences is a radically intelligible undertaking and can be fully carried out in independence of all metaphysical assistance.

The aim of Phenomenology, as we have seen, is to reach back from the world of contingent phenomenal *fact* to experiences in their pure aspect as essences. We reach these essences through *Reduction*. It is only as modified or 'reduced' in conformity with quite special methods of reduction that the phenomena of Psychology or Physics or the Cultural Sciences acquire the requisite signature, so to speak, and enter as essences into Phenomenology. Phenomenology's concern is with transcendently purified phenomena only.

By way of introducing this fundamental method of Reduction Husserl takes up the 'methodical doubt' of Descartes regarded as a method of seeking to doubt something of whose truth under stateable conditions we may notwithstanding be perfectly convinced. What, he asks, is essentially involved in such an attempt at doubt? Clearly some sort of cancellation, some sort of suspension of our normal acceptance of things, *e.g.*, of a given world external to us. The point of interest is to determine the precise sense in which this suspension or cancellation is to be understood. Not in the sense of a negation. The phenomenological doubt does not negate or remove anything. Nor does it place a mark of doubt, indecision or supposal on what it suspends, for seeking to doubt is not the same thing as doubting. It implies no abandonment of our conviction of the justice of the natural standpoint. We do not cease to believe in a given world. Our conviction here remains just what it was. And yet while remaining steadfast it experiences a certain modification. We set it out of action, we cut a circuit and disconnect it, we bracket it as it were. In so doing we do not banish the conviction in any way, nor the natural world it stands for and supports. The disconnected thing remains despite the cutting of the circuit, the bracketed thing remains, though within the brackets. It is simply, and provisionally, set out of action.

The main reduction or purification of phenomena is that which brackets or suspends the whole world of nature. The bracketing, as we have just said, does not imply any denial of the world nor any doubt of its existence. It simply suspends as irrelevant to our phenomenological purpose every judgment concerning existence in time and space, and all the findings of Natural Science. The bracketing suspends as irrelevant all reference to the so-called real world and to

the science which studies it from the natural standpoint. Whatever Science may have to teach us about nature is now left untested and uncontested, simply suspended, all development along this direction checked through the closure of the bracket.

The question may here be asked: Ought not, then, the phenomenological suspension of the natural world to include ourselves, the suspending agents? And if we are ourselves suspended, how can there be any phenomenology? Can there be a phenomenology without a thinker that exists as a natural being? We must recollect what "suspension" precisely means. It simply brackets, it does not negate or remove. Suspension is not Abstraction. As phenomenologists we do not cease to be natural human beings and to speak and write as such. The suspending simply commits us to refrain from bringing into the realm of Phenomenology any feature of our own natural individual existence. Every enquirer into essences, every eidetic enquirer does the same and has the same commitment. So the geometer, though he may speak of himself and his natural interests, keeps that self out of his science. The individual geometer does not belong to the eidetic content of mathematical science.

As the pure residuum left after these purifying processes are completed we have Pure Consciousness as the Consciousness of the Pure Ego. This residue is left because it is totally free from that element of contingency which clings to all natural reality and would permit a reality to be quite conceivably other than it is. Indeed we have in Pure Transcendental Consciousness a primitive mind that is logically prior to the world of fact which it first constitutes through its own original acts. To be understood in its purity it must therefore be studied through a Science that takes no account of fact and uses none of the methods of the empirical sciences. This is the Science of Phenomenology, purely descriptive in method and treating strictly of the essential nature of this absolute consciousness in complete isolation from everything else.

Now for our present purpose the main problem which arises at this point concerns the relation of this world of pure experiences to the unity of consciousness, the unity of a conscious self. In the fifth of his Logical Studies Husserl makes a close study of experiences (*Erlebnisse*), and comes to the conclusion that the phenomenological as distinguished from the empirical Ego is just the unity of experiences and nothing else, a mere unifying function. It is therefore not a true Ego at all, *i.e.*, it cannot say of itself "I am." The only self that

can say this, argues Husserl, is the Empirical Ego, and the Empirical Ego as Husserl conceives it is on the same level as a thing.¹ Hence when abstraction is made of all that is actual or matter of fact, the empirical person disappears for all effective purposes together with the whole world of things, and what is left of the Ego as phenomenological residuum is no more than the unity of the experiences.² Thus the phenomenologically reduced Ego, as Husserl conceives it at this stage of his development, has no distinct nature of its own, it does not transcend its manifold experiences in relative independence of them, but is simply identical with its unitive function. There is here no principle of selfhood: and if there were, there is no possible service for which it could be needed or used.³ Such is Husserl's conclusion in the Fifth Study (first edition). In a further section of this study Husserl criticises the view of a Pure Ego as held by Natorp,⁴ in which Natorp maintains that the Ego as subject cannot itself be an object but only that for which objects exist, yet none the less, as pure subject, its presence in experience can be directly verified. If so, argues Husserl, it must surely be apprehended as an object, for how could it otherwise be apprehended at all? And in that case it cannot be essentially distinct from a thing, and the reduction which cancels the world of things should cancel as well this distinct experienceable Ego. He therefore denies at this stage the existence of a Pure Ego. The phenomenological residuum contains pure self-unified experience, but no Pure Ego.

But already in second edition footnotes⁵ the reader of the Logical Studies learns that Husserl has changed his views on this crucial point, and has come to accept definitely though grudgingly Natorp's Pure Ego. He has realised that the *Cogito*, even in its 'reduced' form is unintelligible apart from the Ego that can say "I am" in addition to uniting its experiences in one psychic tissue or web. Accordingly in his Article on Phenomenology in the first issue of the Annual we find Husserl insisting that the reduction which leaves us with Pure Consciousness leaves us also and inseparably with the Pure Ego as its unifying factor. Every stream of experience has now its own pure ego, a pure ego that transcends the very stream in which it is functionally immanent. Thus the pure subject of the *Cogito* remains as the core of that realm

¹ *Logische Untersuchungen* (Zweiter Band, I Teil, 2^e Auflage, 1913), p. 350.

² *Ibid.*, p. 353.

⁴ *Ibid.*, pp. 359-361.

³ *Ibid.*, p. 354.

⁵ *Ibid.*, pp. 354-363.

of Absolute Experience which the phenomenological reduction gives us as its residuum.

Husserl promises us a chapter on the Pure Ego in his Second Book, the sequel to the "Ideen." Meanwhile he gives it a somewhat cool welcome. He assures us in a second edition observation appended to his Fifth Logical Study¹ that, so far as the logical studies are concerned, its recognition is irrelevant, and that, even in Phenomenology, the most comprehensive problems can be systematically studied without raising the question of the Ego at all.

It may be that the secret of this diffidence with regard to the Pure Ego lies in the fact that Phenomenology has been expressly conceived and defined as a science of ideal essences as opposed to a science of facts. It is its function, we read, to extract the ideality from experience, not indeed from experience in its raw and confused state, but from experience transcendently purified from every reference to the world of fact. The pure experiences one intuits through reflexion, and from which the essential elements are extricated through ideative abstraction, have a distinctive being of their own, though they have not factual being, the being proper to matter-of-fact. Factual being is relative, contingent,—the being of pure experience is absolute, self-contained, for it remains over when the whole world in which we pass our bodily life is annihilated through reduction. Consciousness in itself has a being of its own which no reduction can suspend without self-stultification. The being of Consciousness must indeed be modified by an annihilation of the world of things, but in its own proper existence cannot be affected. Consciousness exists in fundamental independence of things. Things, as physical science conceives them, manifest themselves through appearances, and the appearances are our experiences of these things, and belong to the realm of Pure Consciousness as the things do not. The objective reference, the intentionality, is an intrinsic act of Consciousness, and would subsist even were all real objects annihilated. (Cf. "Ideen," pp. 59, 91.)

Now let us grant that each individual person contains a concrete depth within his own nature which remains existentially self-identical in the face of all possible changes of sense and body, and of time and space, and that Husserl's Method of Reduction is the method best calculated to give us an insight into this our deepest being, and the right point of

¹ *Logische Untersuchungen* (Zweiter Band, I Teil, 2^e Auflage, 1913), p. 333.

view from which to analyse its nature and describe its functions. Let us grant that we have here a unique kind of being absolutely unconditioned by anything but itself, a being so profound that through its acts it shapes all other being in the universe,—let us grant all this. There may very well be such a world, and it may precisely need, for its true interpretation, a method that will guarantee purity from all admixture of empirical, or contingent fact. We cannot do justice to the *a priori* and fundamental in terms of the *a posteriori* and derivative. But the question I would now ask is this: Have we not here the proper conditions for the development of a metaphysic of ultimate reality, a metaphysic of the existent rather than for a phenomenology of essences and essential meanings? It is Husserl's view that the Science of Pure Experience in its essential aspect is the ultimate science with whose findings Metaphysics must conform. Is not the truth rather that the fundamental science is the Metaphysics of Pure Experience, as the fundamental form of Being, and that a Phenomenology that would deal with ideal essences only must be subordinate to a science that deals with ultimate reality and submits its findings to the witness and corroboration of this reality itself?

Professor Husserl proposes to discuss the relation of Phenomenology to Metaphysics in the third book of the volume of which we have at present only the first, and on p. 5 of the "Ideen" he makes the significant anticipatory remark that he will there discuss whether these "irrealities" of Pure Consciousness are, as individual *facta*, susceptible of being scientifically analysed, and also the relation which a factual inquiry of this kind may bear to Metaphysics. But this is all. Phenomenology remains for him the Science *par excellence*, that for which the whole world of Science is yearning to-day, to quote his own expressive phrase. And yet I cannot relinquish the hope that when this third book reaches us, its essential contention will be a reversal of the relative position accorded to Metaphysics and Phenomenology in the book already published, and that the primacy will there be handed over to Metaphysics as the First Philosophy. My hope rests on the fact that after much hesitation Husserl has definitely committed himself to the doctrine of a Pure Ego. If the world of ultimate reality, a world that persists through all changes of place, time or embodiment is not simply an organised system of pure experiences in general, but the very world of my own most fundamental experience, so that in probing its depths I am probing the structure of my most intimate individuality, the doctrine of essences, when pushed

far enough, must pass over at the limit into a doctrine of spiritual substance. The very attempt to grasp the Pure Ego wholly as an ideal nature or essence must prove unsuccessful. For to get the right viewpoint for apprehending the Pure Ego, the phenomenologist must explore it from within in and through his own most fundamental experience. There is no other way than this of reaching the self at all. It is only in being the self that one can know it. One must live one's personality existentially, enjoy direct acquaintance with oneself through that form of awareness and revelation that we may call experiential self-intuition, before we can develop any scheme of self-knowledge based on critical reflexion. I would suggest that self-consciousness, implicit or explicit, is essential to that pure self-existence which phenomenological method isolates and reveals to us. Take self-consciousness, implicit and explicit, away from self-existence, and you get as your residuum a forlorn medley of unowned experiences. And Husserl himself virtually admits this when he reinstates the Pure Ego as the indispensable correlative and binding power of the world of Pure Consciousness. If then existence, at its fountain-head, is intrinsically related to Consciousness, and so intimately so that self-consciousness is itself an integral constituent of self-existence, it would be impossible to develop a science of the Pure Ego in its essential aspect which was not also a science of self-existence, and therefore a metaphysical science, a science of ultimate reality.

It is quite true that at this depth of enquiry we have got away completely from fluctuations of meaning that depend on varying occasions and empirical changes of aspect from 'this' to 'that,' 'then' to 'now,' or 'here' to 'there.' What we have not got away from is the intrinsic indispensability of living experience for making clear the meaning of "I." Pure Consciousness, as the Absolute, cannot be exhaustively studied in essence only. We can learn its ultimate secret only when we treat it as a realm of basic, existential fact, the nature of which it is the function of Metaphysics to unravel, with as much help from Phenomenology as the nature of the case allows.

There is a further though kindred direction in which Husserl's work reveals the need for a metaphysical foundation. In the *Prolegomena* to the "Logical Studies" Normative Logic is subordinated to Pure Logic, the latter being regarded as the source of the former's validity. But even if we grant that a Pure Logic justifies us in applying standards of Intelligibility and condemning as nonsensical or absurd any statement which fails to conform to these standards, we still

leave unaccounted for the sense of obligation which attaches to all rational enquiry after truth. Here the ideality of meanings on which Husserl lays so much stress can give us no help. Ideality of meanings, so we read in the first of the Logical Studies, has no connexion with normative ideality. It is an ideality of the specific type, and only the individual that falls under the specifically ideal can be a practical normative ideal to us. There is no hint here of the Platonic vision of the Good as the source of all forms and values, and of the obligation to seek the good in all things which that vision awakens in us. Is not aspiration after the Ideal the most outstanding discriminating mark between the spiritual and the animal in our nature? And can the Pure Ego which holds our deepest experiences together and stamps them as ours display its unifying function more effectively than in the unity of aspiration which leads us to identify ourselves with the requirements of Ideals and to regard these same Ideals as the most real power in our human nature? In Husserl's work, as we so far have it, there is no recognition of the reality of Ideals and of their significance for a Theory of Pure Consciousness. The nearest approach to such a recognition comes in a note to § 51 of the Article in the Annual. The principle of Order in the universe, so we are given to understand, will be found, if anywhere, in the realm of Absolute Consciousness which the phenomenological reduction liberates for us. It should be revealed to us there directly and intuitively as a transcendence of quite a different kind from the transcendence of the real thing; and though Husserl does not expressly say so, it is probable that he has in mind that transcendence in immanence which he accepts as marking the relation of the Pure Ego to the stream of its own pure consciousness. But this we can only surmise. Husserl cuts the discussion short on the ground that he is concerned with Phenomenology and not with Theology, though he admits that Phenomenology may eventually mean a great deal for the renovation of Theology. What is not grasped or admitted is that a metaphysical theology may be the only fundamental way of developing the religious implications of the Pure Ego and its pure consciousness, and that a purely ideal interpretation of God is as intrinsically impossible as a purely ideal interpretation of the Self. I will here content myself with the following suggestion: In so far as we claim to experience the divine in our life through our sense of ideal values and in so far as these ideal values enter intimately into our whole life of desire, and are indissolubly bound up with all our striving after what we conceive to be

a good, it is quite impossible to separate our self from the values that motivate all its appetite and aspiration. The Ideal is in sober truth the soul of our soul. Were we to withdraw the Good from our life, our central self, all its purposiveness, would disappear. We should no longer be ourselves. Hence if the meaning of "I" can be given on y in intimate conjunction with the witness of my own self-consciousness and therefore of my own self-existence, the same must be true of the meaning of God conceived as the Ideal, since the meaning of "I" cannot itself be given except in terms of the Ideal immanent in all its personal endeavour.

I leave to the last the point of greatest difficulty and disagreement which I find in Husserl's work: that is, his absolute criterion of "*Evidenz*." "*Evidenz*," he tells us, is the experience of Truth, not directly in and for itself, but in and through particular instances (*cf.* Prolegomena, p. 190). Truth itself is an Idea, an Idea of which, in and through individual instances, we have an actual experience. We see truths as essences through pure categorial Intuition, through an intuition which *sees* the essences in instances and *sees* them as true. This whole theory of "*Evidenz*" stands out sharply in Husserl's work as a rock of stumbling and offence to the scientific consciousness, and may be chiefly responsible for the tendency of many thinkers to look askance at Husserl and question the value of his work. My own view is that this phenomenological criterion is flagrantly and inexplicably dogmatic, and a *reductio ad absurdum* of the attempt to make the phenomenology of essences the absolute science in place of the metaphysic of existence. Experiential self-intuition can indeed give us direct and living evidence of self-existence which no one can gainsay. But it is the evidence of life's own immediate self-awareness, not of reflective thought or science. If, on the other hand, Husserl had left the primacy with Metaphysics, his criterion of self-evidence would naturally have been dropped, and in its place we should have had the harmony of idea with reality, the capacity of the idea to vivify, illuminate and organise the reality it concerned.

The way in which I try to explain to myself how it is that a thinker of Husserl's calibre can adopt and maintain this criterion of self-evidence is by the reminder that Phenomenology is purely descriptive in its method, and that description is simply interpretative observation, and observation essentially a matter of seeing, and of seeing clearly and distinctly. But on analysis this attempted defence of Husserl does not satisfy me. It is one thing for a writer like Bergson

to tell us that philosophy can do no more than lead you to the point of vision, and then leave you to see for yourself—for such vision is experiential vision, and as such is life and not philosophy; it is quite another matter when our seeing requires a prodigious intellectual effort and is expected to lay out in ordered forms the essential constituents of pure consciousness. Here intuition is intensely intellectual and analytic, and far removed from the mere setting down of what is thrust before one's gaze. It is mainly and essentially interpretation, and how can we assume that such interpretation is infallible and self-evidential?

But if the phenomenological criterion of self-evidence must give way before the metaphysical criterion of the harmony of idea with reality, and if to this extent the work of Husserl needs revising—revising, that is, by himself in his Third Book, his pure logical criterion stands on quite another footing, and is one of Husserl's most important contributions to clear thinking. Instead of refuting an idea by showing up its falsity, its incompatibility with a world of fact, Pure Logic refutes it by showing up its intrinsic absurdity, and convicting it of sinning against its own assumptions. If a scientific thinker who thinks in the name of Science, and develops theories in the form of judgments, makes statements that contradict the notions of science, theory or judgment, or any of their implications, he falls into self-contradiction, and his statements, being self-defeating, are indeed more unacceptable than if this content were empirically shown to be contrary to the facts. To speak in the name of intelligibility and refute a position as absurd is an important and necessary variant to the practice of speaking in the name of 'Truth,' and refuting a position as untrue.

Let me hark back in conclusion to the criticism of 'Evidenz,' conceived as our way of experiencing Truth. Suppose we admit that Truth is an Ideal rather than an Idea, and are convinced that as an Ideal it is the most ultimately real thing there is; the question of the precise nature of this Ideal and of our apprehension of it, becomes a most interesting metaphysical problem, and the analyses of Phenomenology may be of the greatest assistance to Metaphysics in its attempt to solve the problem. But such experience of Truth does not give us criteria to our hand, it simply challenges us to seek and devise criteria that will fit the requirements of thought, and confute the sceptic by their intrinsic reasonableness.

Our conclusion, then, is this: Ideal meanings are not, in the crucial case of the Pure Ego at any rate, dissociable from the Ego's real existence. To this extent real and ideal have

a common origin and are not wholly disparate as Husserl would have them be. The reality with which ideality is so indissolubly connected is not contingent and relative but unconditional and absolute. But whilst unable to agree with Husserl's present subordination of Metaphysics to Phenomenology, considering rather that Phenomenology has ragged edges which point to Metaphysics for its ultimate completion, we may yet be persuaded that Husserl's work is, philosophically, of the very first importance. Many of Husserl's most valuable discussions have perforce been wholly overlooked in this article with its limited objective. His distinction between two grades of absurdity [*vide* below, Note I.], his view of the logical basis of grammar founded upon this distinction [*vide* below, Note II.], and the thoroughgoing analysis of the different types of transcendence, notably that of Nature or the External World [*vide* below, Note III.], these are analyses for which Philosophy cannot but feel deeply indebted.

Meanwhile let us hope that some one will have the requisite courage, insight, leisure, and familiarity with the niceties of philosophical speech to translate this great thinker into readable English. It would be something really worth doing.

NOTE I. *The Two Grades of Absurdity.* (Vide: *Log. Untersuchungen*, IV., § 12 sq.).

Perhaps the simplest and most significant of Husserl's definitions of Pure Logic is that which presents it as the Science of Meaning. Logic, we read, is the science of unitary theory in general, and since all theoretical unity is essentially unity of meaning, we may suitably define Logic as the Science of Meaning, its essential kinds and distinctions and the pure ideal laws grounded in these. Now meaning may be considered *simpliciter*, in and for itself, or in its reference to the objects meant. Meaning and Object meant are the two primary and closely related categories of Husserl's Logic, closely related, since it is only through its meaning that an expression wins objective reference. Everything logical falls under one or other of these two fundamental categories, and all logical categories are just the *a priori* implications of "meaning" and "object meant." Thus on the one hand we have, as categories of the object meant, as formal objective categories, the main concepts implied in the idea of *object* as such: *e.g.*, object, unity, and plurality, whole and part, number, relation; and, on the other, as categories of meaning, we have the concepts implied in the very idea of a

theoretical unity, in the very meaning of meaning: *e.g.*, concept, proposition, truth; and the elementary forms of connexion between these: conjunctive, disjunctive, hypothetical interconnexions of propositions; subject-forms and predicate-forms, etc. These are the Categories of Meaning as the former are the Categories of the Object meant.

Husserl's whole treatment of Pure Logic is determined by this fundamental distinction between Meaning and Object and their respective categories. It leads him to separate off a preliminary stratum of Pure Meaning as a basis for a corresponding type of Logic to which he refers as Apophantic Logic, reserving the title of Formal Logic proper for the Logic built up on the basis of the categories of the Object meant. Each of these two strata has its own *a priori* laws: the pure logical laws prescribe the formal conditions on which the unity of an *object* depends for its possibility, whereas the laws of meaning-complexes determine *a priori* the conditions on which unity of *meaning* so depends. The essential function of these latter laws is to sift off what is radically meaningless or nonsensical, and so pave a way for the true Formal Logic which deals only with good sense, *i.e.*, with forms of meaning which are formally sound and therefore satisfy a first preliminary condition for objective reference.

As instances of the type of unintelligibility which is put down as Nonsense and therefore never finds an entrance into the inner realm of Pure Logic at all even as a datum or problem, we have such phrases as "A tree and is," "very if cat the," phrases which show the fundamental flaw of confusing or intermixing the meaning-categories. Now this type of unintelligibility is more fundamental than the type which presents a combination that does not confuse categories and their proper relations, and in this sense is formally sound: *e.g.*, "A round square" or "This square is not a square." These phrases are of course objectively absurd: they have no possible objective reference. But, according to Husserl, this is not a sufficient reason for treating them, as Sigwart does, as mere word complexes devoid of all intelligibility whatsoever. To Husserl they are not strictly unintelligible, having a mode of existence as ideal meanings which, though incapable of objective reference, can still be reflected over as a legitimate form of meaning. On the other hand, the nonsensical combinations, in which categories and their relations are jumbled together, are not even notions or propositions. The confusion of categories prevents this. But the combinations which are objectively unintelligible are quite genuine as mere notions or propositions; *e.g.*, 'wooden iron' or 'all squares have five

corners.' What is wrong with these phrases, on Husserl's view, is simply that the world of objects cannot recognise or receive them.

We see then that on Husserl's principles, an expression can still have a certain meaning even though that meaning have no intuitive outlet, no object to which it can refer. It has meaning in so far as it signifies an intended syntheses of elements which are objectively incompatible. Meaning, for Husserl, is essentially intended meaning. Fulfilled meaning, meaning fulfilled through its objective reference, is a further development. A meaning does not need to be illustrated in order to be meant.

The requirements of *Intelligibility* must then be considered in two stages: firstly, the conditions necessary for unity of meaning—and these are essentially the proper ordering and interrelating of categories; and, secondly, the conditions upon which the unity of an object depends for its thinkability as an object. In this twofold sense Pure Logic furnishes for Philosophy the standard of intelligibility and its laws are the laws of intelligibility. They cannot sift away what is erroneous or false, but only what is nonsensical or absurd.

NOTE II.: *The Logical Basis of Grammar*. (Vide: *Logische Untersuchungen*, IV.: "Der Unterschied der selbständigen und unselbständigen Bedeutungen und die Idee der reinen Grammatik".)

It is Husserl's view that if we restrict the scope of the logical to the analysis of *Meaning as such*, and set completely aside the whole issue of *Objective Reference* and its intelligibility, we shall be reducing Logic to dimensions compatible with the interests and requirements of Grammar, and the problem of a logical basis for Grammar assumes a more promising form.

There is, argues Husserl, an important element of truth contained in the old rationalistic conception of a Universal Grammar. The grammarians of this school in the seventeenth and eighteenth centuries were instinctively feeling after a good thing. In the sphere of Grammar also there is a fixed measure, an *a priori* norm which should not be overstepped. Just as in the sphere of Logic we distinguish the *a priori* as Pure Logic from empirical and practical Logic, so too in the sphere of Grammar we may distinguish the pure-grammatical, the *a priori* element in Grammar, the ideal form, as they excellently said, from the empirical element. In both cases alike, in Grammar as in Logic, the

empirical is determined partly through what is universal in human nature, and partly through the accidents of race, of historic nationality and of individuality; and the strictly *a priori*, here as everywhere, in its more primitive forms at any rate, is something obvious, yes even trivial. None the less its systematic presentation and theoretical development is as important as it is difficult. Universal Grammar, empirically understood, would no doubt have a root in theoretical Sciences other than pure, apophantic Logic: in phonetics and comparative linguistics, for instance; but it could not dispense with the basic support of *a priori* elements won from the very form of meaning itself. It is, in Husserl's view, of fundamental importance for linguistic research to bring to clear consciousness the distinctions here summarily indicated, and to grasp the fact that speech has not only its physiological, psychological and cultural bases but also its basis in the *a priori*. Under this *a priori* we include the essential forms of meaning and the laws according to which speech-complexes are built up and modified in various ways; and no speech is thinkable which is not essentially determined in part through this *a priori*. The pure theory of the forms of meanings—the basic region within the sphere of Pure Logic—provides an ideal scheme which each existing language can variously fill out with empirical material taken partly from what is universal in human nature, partly from empirical tendencies of a more occasional kind. The pure logic of meaning is very rich in distinctions which must be binding *a priori* on the human mind, even in its grammatical developments, and we must fall back upon these distinctions as fundamental when we ask how Germans, Romans, Chinese express the different forms of proposition, the word "not," the modalities indicated by the words 'possible,' 'probable,' 'necessary,' and so forth. Husserl concludes that since this basic domain of Pure Logic is fundamental for the understanding of the ideal nature of all speech, and is not concerned with truth or objectivity, it might suitably be referred to as *pure-logical grammar*.

NOTE III.: *On the Perception of Real Things.* (Vide: "Ideen," §§ 149-50; cf. also the second main section of the essay.)

According to Husserl the most radical of all distinctions in the nature of Being is that between Being as Consciousness, and Being as that which declares itself in Consciousness, namely transcendent Being. Being as Consciousness he

describes as absolute and transcendental. It is absolute because it is Consciousness in itself and not consciousness of something other than itself. In pure Consciousness as such we experience the essential in a perfectly transparent form. We do not see it—as is the case with all transcendental Being—only in and through its appearances or manifestations, we are in touch here with the primal source of all appearance or manifestation. The realm of transcendental Consciousness—of consciousness purified by phenomenological reduction, or, as I should be content to say, of consciousness grasped from its own proper standpoint at once inner and non-sensory, this realm is for Husserl the most primitive region of Being, the region in which all others are rooted and on which they are essentially dependent.

In our consciousness of Consciousness we are what we perceive. Hence our perception here is purely immanent. Our consciousness of real things, on the other hand, is in no sense a perception of what we are, but only of a Being which declares or manifests itself in and through our Consciousness. We perceive Things only through their perspective manifestations.

Husserl's insistence on the transcendence of the things we perceive implies in no sense an adhesion to the old and familiar doctrine of the Thing-in-itself. This doctrine he emphatically repudiates. A widely current form of Realism, he remarks, takes the real perceived object as the substructure of another object, inwardly foreign to it and separate from it. This hypothetical object is regarded as the cause of the perceived object and is identified with the "physical thing." According to Husserl the perceived thing, both of the man in the street and of the physicist, can be intelligibly understood only in intimate relationship with the various appearances through which it is manifest, whether through secondary or through primary qualities. The transcendence of the physical thing is the transcendence of a type of Being which is bound up with Consciousness and develops and takes place within its field.

To understand the constitution of 'Thing in general' we must look at it from the standpoint of a reality that manifests itself through time and space in the form of sensory appearances. The two main points are these:—(1°) The 'Thing' is essentially transcendental. As such it is still essentially experienceable, and its unitary nature can be grasped by us intellectually in the form of a regulative Idea; still, in consequence of a thing's transcendence, our capacity to apprehend it is limited in certain significant ways.

Husserl recognises many different types of Transcendence. The quality of a thing, its colour, shall we say, transcends the series of colour-sensations through which it is seen by individuals under all the varying conditions of distance, clearness, bodily state, etc. The colour-quality is an attribute of the Real Thing, but our colour sensations are not. And yet analysis reveals the most intimate relation between these sensations and the quality of the thing. The sensations are the manifold appearances of the quality itself, and the quality cannot claim any reality apart from its appearances. Was there ever a green leaf that was not seen at a certain distance by a certain individual eye under certain determinate atmospheric conditions? Quality is generically a unity, the unity of its sensory appearances, and has no being independently of its sensory manifestations. Its whole function is to manifest itself and it realises its unity in so doing. It shows a certain characteristic permanence in relation to all its sensory shows and shiftings, but it is a permanence which, paradoxically enough, persists only in virtue of its never being for one moment the same. The quality transcends the sensory appearances as their mobile unity, and as unitary essence is wholly distinct from the sensory appearances; at the same time it is wholly immanent in its appearances, having no being save in and through these sensory manifestations.

Take again *Time* as we individually experience it, phenomenological Time. This, as Husserl conceives it, is always an appearance form of unitary or cosmic Time. The two Times are generically distinct, one being essence, the other merely instance. Transcendent, cosmic Time manifests itself appearance-wise in experiences. Similarly with Spatial form and the corresponding distinction between cosmic extension, on the one hand, and the extensity forms of sensory data, on the other. The precise nature of the transcendence in each case calls for separate and special analysis. The Pure Ego of whose immanence in Pure Consciousness we have so transparent an experience, the Pure Ego, according to Husserl, shows a quite distinctive transcendence of its own, an intrinsically primitive one, a transcendence in immanence. (*Ideen*, § 57.) Similarly the transcendent presence of God within the world of immanent relationships will have a special quality of its own. (*Ideen*, § 58.)

Transcendence is thus a genus containing under it many specific forms, each possessing its own differentia. We come now to the second main point. (2^d) The spatial thing, we

have already seen, is intuitable only through its appearances. But it manifests itself in a quite distinctive way. It manifests itself through a threefold series of appearances, and each of these is an infinite series. It is, on Husserl's view, a matter of absolute self-evidence that the thing at all its levels, as *res extensa*, *res temporalis*, *res materialis*, contains in its very essence ideal possibilities of boundless progression in various prefigured directions. No intuition along any one of these directions can possibly be the last or in any sense adequate. By reason of its transcendent form of manifestation, the manifestation can never be adequate. No appearance can adequately reveal the thing. There is always a further perception available, some indeterminacy that can be made more determinate, some incompleteness still to fill. It is a matter of essential insight that every perception and series of perceptions is capable of indefinite extension. Some discoverable novelty is of the very essence of a material thing.

The qualified thing, as the unitary essence of its sense-appearances, is grasped, according to Husserl, through its Idea. The Idea "Thing" in which our apprehensions of all this boundlessness of manifestation is summed up is a perfectly definite insight into the unity of the Thing maintaining itself in and through all the determinate directions of infinite development. As *res temporalis*, with the endless extensibility from one moment of experience to another; as *res extensa*, with its infinite possibilities of variation in form, shape, position and movement; and as *res materialis*, the unity of manifold causal connexions as well as of substance. It is, I think, an illuminating insight of Husserl's to connect the intrinsic infinitude of a Thing as manifested in its appearances, not only with the endlessness of space and time but also with the endlessness of the series of perspective views or aspects, presented in the varying forms of sense. The manifested Thing is infinite in three main directions at once.

V.—A LOGICAL STUDY OF LAW.

BY BENJAMIN IVES GILMAN.

THREE opinions about nature, or the world of scientific observation, are widely held:—

Everything is governed by law.

The will, for example, is determined.

The world is in reality one, and only in appearance many.

The following study aims to examine these opinions and their contraries:—

Not everything is governed by law.

The will, for example, is free.

The world is in reality many, and only in appearance one.

I. UNIVERSES OF LAW AND CHANCE.

What is called a "thing" is a sum of different characters. Otherwise expressed, the process called abstraction has a result called a character; and the different results of different processes of abstraction may be regarded as a unity. The decision so to regard different characters makes of them a thing.

The relation between character and thing is called, from the point of view of the thing, possession of, or subsumption under the character; and from the point of view of the character, illustration, or exemplification, by the thing.

In the instance of any given character and any given thing, the relation may either be affirmed or denied. It may be said either that the thing possesses the character, or does not possess it, that it lacks it. Let a letter, as a , symbolise the possession of a certain character; and the same letter with a bar above, as \bar{a} , symbolise lack of it. A group of such letters may then be taken to signify possession of, or lack of, the characters they symbolise, by one and the same thing.

It may be conceived that different characters are limited in number. The number of different possible things will

then also be limited, being the number of different possible groups of the different characters. For every thing must possess two or more characters and may lack the others, and any two things must differ in some character.¹

Let it be supposed that different characters are five in number. Then all the possible different things will be represented by writing first the group of symbols for all five characters, then every possible group of four, three and two. For since any thing possesses more than one character, the combinations containing all, or all but one of the letters with bars, represent no thing. Adding to the designation of each thing the symbols for the characters it lacks, the different things possible are given in the following table:—

(All five)	(Three)	(Two)
1. $abcde$	7. $abc\bar{d}\bar{e}$	17. $ab\bar{c}\bar{d}\bar{e}$
	8. $ab\bar{c}d\bar{e}$	18. $a\bar{b}\bar{c}d\bar{e}$
	9. $ab\bar{c}d\bar{e}$	19. $a\bar{b}\bar{c}d\bar{e}$
	10. $a\bar{b}\bar{c}d\bar{e}$	20. $a\bar{b}\bar{c}d\bar{e}$
(Four)	11. $a\bar{b}\bar{c}d\bar{e}$	21. $a\bar{b}\bar{c}d\bar{e}$
2. $abcde$	12. $a\bar{b}\bar{c}d\bar{e}$	22. $a\bar{b}\bar{c}d\bar{e}$
3. $abcde$	13. $a\bar{b}\bar{c}d\bar{e}$	23. $a\bar{b}\bar{c}d\bar{e}$
4. $abcde$	14. $a\bar{b}\bar{c}d\bar{e}$	24. $a\bar{b}\bar{c}d\bar{e}$
5. $a\bar{b}\bar{c}d\bar{e}$	15. $a\bar{b}\bar{c}d\bar{e}$	25. $a\bar{b}\bar{c}d\bar{e}$
6. $a\bar{b}\bar{c}d\bar{e}$	16. $a\bar{b}\bar{c}d\bar{e}$	26. $a\bar{b}\bar{c}d\bar{e}$

¹ The late Charles S. Peirce, whose papers on the Logic of Science have given the point of departure for the present study, adduces and later appears to withdraw, a principle attributed to De Morgan according to which characters cannot be conceived to be limited in number. (The papers are reprinted in "Chance, Love and Logic," N. Y., 1923, where the reference appears on p. 112.) Every possible lot of objects whatever, for example, characters, have a character in common which is peculiar to them, and every possible group of the group thus enlarged has also a character of its own superadded; and so on *ad infinitum*.

The principle of De Morgan's, as here applied, concerns characters which are the results of abstraction from previous results of abstraction. Characters which are the results of abstraction not involving previous abstraction, are not demonstrably unlimited in number by the principle. It is such "primary" characters, as they may be called, that are made the basis of the present study. Peirce instances, as an example of a superadded character, the character "un-ab-less-ness". This is a new verbal expression for the notion of the possession by a thing of the two characters *a* and *b*. As often in logical discussion, here again Occam's rule of good thinking, "*Entia non sunt multiplicanda practer necessitatem*," may be applied. Peirce seems to have recognised the distinction, though without stating it. (Note p. 114.)

Such a manifold of different possible things may be spoken of as a limited universe.

A conditional proposition is the assertion that if a thing possess a certain character, it also possesses a certain other; briefly, If x then y . In such a proposition, the phrase, If x , or x alone, is called the condition; the phrase, then y , or y alone, is called the conclusion. A conditional proposition may also be expressed by the formula—No thing is possible which both exemplifies x and does not exemplify y ; and may be symbolised by forming the group $x\bar{y}$ and equating it to zero; thus $x\bar{y} = 0$.

A conditional proposition is termed a law. A law, therefore, asserts that anything possessing a certain character possesses also a certain other—not, it is true, under all conceivable circumstances, but under all possible circumstances, that is under all circumstances except those which the law conceives only to deny that they are possible.

The notion of chance is opposed to that of law as its absence. Since the absence of law is at once a negative and a relative conception, the use of the term chance presents difficulties. To regard anything as a whole is, by this definition of chance, to regard it as a chance object; since to regard it as an instance of law, is to analyse it into a condition and a conclusion. Farther, speaking strictly, the absence of the conditional relation is illustrated by any pairs of characters related only otherwise than as condition and conclusion. Whatever relation they possess is then one of chance. By custom, nevertheless, the term is restricted to those pairs in which a given character is unconditioned by any others with which it occurs, the character being then called a chance character. With equal right it might be used in the complementary but uncustomary sense of a character which does not condition any others with which it occurs. The term "chance" is thus open to misunderstanding unless the context makes clear whether the word is taken to mean the lawless in general, or the unconditioned or the unconditioning or both.

In a limited universe the laws possible are those in which each of the characters appears as condition in propositions in which each of the others appears as conclusion. For in these laws each of the characters will also appear as conclusion in propositions in which each of the others appears as condition.

Considering only simple laws, that is, laws regarding single characters, in a universe exhibiting five, the possible laws are the following twenty:—

$\bar{a}\bar{b} = 0$	$b\bar{a} = 0$	$\bar{c}\bar{a} = 0$	$\bar{d}\bar{a} = 0$	$\bar{e}\bar{a} = 0$
$\bar{a}\bar{c} = 0$	$b\bar{c} = 0$	$\bar{c}\bar{b} = 0$	$\bar{d}\bar{b} = 0$	$\bar{e}\bar{b} = 0$
$\bar{a}\bar{d} = 0$	$b\bar{d} = 0$	$\bar{c}\bar{d} = 0$	$\bar{d}\bar{c} = 0$	$\bar{e}\bar{c} = 0$
$\bar{a}\bar{e} = 0$	$b\bar{e} = 0$	$\bar{c}\bar{e} = 0$	$\bar{d}\bar{e} = 0$	$\bar{e}\bar{d} = 0$

Each one of these possible laws denies the possibility of a different selection of seven of the twenty-six things possible in a universe limited to the five characters supposed; as shown in the table on p. 338. Here the things whose possibility is denied are indicated by zeros on a line with each law.

The universe may be supposed to exhibit either none of these possible laws, or all or some only.

If none are true, the universe may consist of all possible things. For if it consist of all possible things, none of the laws will be true since each deletes some of them. It may also consist of only a small selection of things. For example, if it consist of only the five things numbered 2 to 6, no one of the twenty laws is true, since each deletes one of these things.

If all the laws are true, the universe reduces to the single thing *abcde*. Every one of the others is deleted by four or more of the laws, as appears upon inspection.

Conversely, if the universe consists of the single thing *abcde* only, then all the possible laws are true. For each of them deletes only a selection from the other things, and if no such things exist, is true.

It is to be noted that the universe cannot consist of any other single thing than *abcde*. For it would then lack some one or more of the characters assumed to be exhibited by it.

It is to be noted further that two laws may be so chosen that another may be deduced from them. This possibility results from the transitive nature of the conditional relation. A relation is transitive when its presence between a first and a third term follows from its presence at once between the first term and a second and between the second and the third. The conditional relation, the relation illustrated in law, is an instance. From the laws, if *a* then *b*, or $\bar{a}\bar{b} = 0$, and, if *b* then *c*, or $\bar{b}\bar{c} = 0$, the law, if *a* then *c*, or $\bar{a}\bar{c} = 0$, follows. This appears on inspecting the table of deletions. The law $\bar{a}\bar{b} = 0$ deletes the things numbered 5, 10, 11, 12, 18, 19 and 20. The law $\bar{b}\bar{c} = 0$ deletes 4, 8, 9, 15, 17, 21 and 22. The law $\bar{a}\bar{c} = 0$ deletes three of the first series, namely 12, 19 and 20; and four of the second, namely 4, 8, 9 and 17; and

deletes no others. It is therefore true, if the other two laws are true.

Deletions by all Possible Laws.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
$a\bar{b} = 0$				0						0	0	0						0	0	0						
$a\bar{c} = 0$				0				0	0		0						0		0	0						
$a\bar{d} = 0$			0				0	0	0								0	0		0						
$a\bar{e} = 0$		0					0	0	0								0	0	0							
$b\bar{a} = 0$					0								0	0	0						0	0	0			
$b\bar{c} = 0$			0					0	0						0		0				0	0				
$b\bar{d} = 0$			0				0	0					0				0				0		0			
$b\bar{e} = 0$		0					0	0					0				0					0	0			
$c\bar{a} = 0$					0								0	0		0							0	0	0	
$c\bar{b} = 0$				0					0	0						0	0						0	0		
$c\bar{d} = 0$			0				0			0			0				0					0	0			
$c\bar{e} = 0$		0					0		0			0					0					0		0		
$d\bar{a} = 0$					0								0		0	0						0		0	0	
$d\bar{b} = 0$				0					0	0					0		0		0		0		0		0	
$d\bar{c} = 0$			0				0			0			0				0		0		0		0		0	
$d\bar{e} = 0$		0					0	0			0						0			0		0		0		
$e\bar{a} = 0$					0									0	0	0					0		0	0	0	
$e\bar{b} = 0$				0						0	0				0				0			0		0	0	
$e\bar{c} = 0$			0				0		0		0			0					0	0				0		
$e\bar{d} = 0$			0					0	0				0							0	0			0		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

Finally, if some but not all of the laws are true, the universe will consist of one or other group of things, according to the laws chosen.

Various types of limited universe, resulting from these three

possible suppositions regarding the presence, or absence, of law, may be reached as follows:—

1. No laws.

Pluralistic Universe of Chance. I.

No character either conditions or is conditioned by any other.

2. All laws. Two cases are of interest.

Monistic Universe of Law. II.

Every character both conditions and is conditioned by every other. Simple serial type.

Monistic Universe of Law. III.

Every character both conditions and is conditioned by every other. Complex serial type.

3. Some laws only. Five cases are of interest.

Pluralistic Universe of mingled Law and Chance. IV.

Every character both conditions and is conditioned by some other.

Pluralistic Universe of mingled Law and Chance. V.

Every character conditions some other but not every character is conditioned by any other. Single type.

Pluralistic Universe of mingled Law and Chance. VI.

Every character conditions some other but not every character is conditioned by any other. Dual type.

Pluralistic Universe of mingled Law and Chance. VII.

Some characters both condition and are conditioned by some other; but some do not condition any other, and some are not conditioned by any other.

Pluralistic Universe of mingled Law and Chance. VIII.

Some characters both condition and are conditioned by some other; but some neither condition nor are conditioned by any other.

These eight different types of universe are illustrated by the following eight different groups of laws either in abeyance or action.

Pluralistic Universe of Chance. I.

No character either conditions or is conditioned by any other.

Here the table of laws is blank and may be represented throughout by small letters:—

$\bar{a}\bar{b} = 0$	$\bar{b}\bar{a} = 0$	$\bar{c}\bar{a} = 0$	$\bar{d}\bar{a} = 0$	$\bar{e}\bar{a} = 0$
$\bar{a}\bar{c} = 0$	$\bar{b}\bar{c} = 0$	$\bar{c}\bar{b} = 0$	$\bar{d}\bar{b} = 0$	$\bar{e}\bar{b} = 0$
$\bar{a}\bar{d} = 0$	$\bar{b}\bar{d} = 0$	$\bar{c}\bar{d} = 0$	$\bar{d}\bar{c} = 0$	$\bar{e}\bar{c} = 0$
$\bar{a}\bar{e} = 0$	$\bar{b}\bar{e} = 0$	$\bar{c}\bar{e} = 0$	$\bar{d}\bar{e} = 0$	$\bar{e}\bar{d} = 0$

This universe may, as already stated, consist either of all possible things, that is, of things together exhibiting all possible cases of the possession or lack of the five characters; or of a selection from the things, for example, of the five things 2 to 6.

Monistic Universe of Law. II.

Every character both conditions and is conditioned by every other. Simple serial type.

One possible group of laws from which all the others follow is here indicated by capital letters:—

$$\begin{array}{lllll}
 \overline{AB} = 0 & \overline{ba} = 0 & \overline{ca} = 0 & \overline{da} = 0 & \overline{EA} = 0 \\
 \overline{ac} = 0 & \overline{BC} = 0 & \overline{cb} = 0 & \overline{db} = 0 & \overline{eb} = 0 \\
 \overline{ad} = 0 & \overline{bd} = 0 & \overline{CD} = 0 & \overline{dc} = 0 & \overline{ec} = 0 \\
 \overline{ae} = 0 & \overline{be} = 0 & \overline{ce} = 0 & \overline{DE} = 0 & \overline{ed} = 0
 \end{array}$$

The table of deletions shows that these laws delete every possible thing except *abcde*. The universe consists of this thing alone.

Monistic Universe of Law. III.

Every character both conditions and is conditioned by every other. Complex serial type.

Another group having the same effect consists of the first four laws of the foregoing group with the converse of each:—

$$\begin{array}{lllll}
 \overline{AB} = 0 & \overline{BA} = 0 & \overline{ca} = 0 & \overline{da} = 0 & \overline{ea} = 0 \\
 \overline{ac} = 0 & \overline{BC} = 0 & \overline{cB} = 0 & \overline{db} = 0 & \overline{eb} = 0 \\
 \overline{ad} = 0 & \overline{bd} = 0 & \overline{cD} = 0 & \overline{DC} = 0 & \overline{ec} = 0 \\
 \overline{ae} = 0 & \overline{be} = 0 & \overline{ce} = 0 & \overline{DE} = 0 & \overline{ED} = 0
 \end{array}$$

The table of deletions again shows that the resulting universe consists of *abcde* alone.

Pluralistic Universe of mingled Law and Chance. IV.

Every character both conditions and is conditioned by some other.

A group of laws illustrating this case is the following:—

$$\begin{array}{lllll}
 \overline{AB} = 0 & \overline{ba} = 0 & \overline{CA} = 0 & \overline{da} = 0 & \overline{ea} = 0 \\
 \overline{ac} = 0 & \overline{BC} = 0 & \overline{cb} = 0 & \overline{db} = 0 & \overline{eb} = 0 \\
 \overline{ad} = 0 & \overline{bd} = 0 & \overline{cd} = 0 & \overline{dc} = 0 & \overline{ec} = 0 \\
 \overline{ae} = 0 & \overline{be} = 0 & \overline{ce} = 0 & \overline{DE} = 0 & \overline{ED} = 0
 \end{array}$$

This universe may be described as a pluralistic universe containing two worlds each completely governed by law, and hence monistic, but in chance connexion one with another.

For it consists of the three things

$$\begin{array}{ccc} & abcde & \\ abc\bar{d}\bar{e} & & \bar{a}\bar{b}\bar{c}de \end{array}$$

Here a , b and c are always found together in any thing in which one of them appears, and likewise d and e ; but abc may be found either with or without de and *vice versa*. The union of the two groups in $abcde$ is a chance happening.

Pluralistic Universe of mingled Law and Chance. V.

Every character conditions some other, but not every character is conditioned by any other. Single type.

A group of laws illustrating this case is the following:—

$$\begin{array}{ccccc} A\bar{B} = 0 & b\bar{a} = 0 & c\bar{a} = 0 & d\bar{a} = 0 & e\bar{a} = 0 \\ a\bar{c} = 0 & B\bar{C} = 0 & c\bar{b} = 0 & d\bar{b} = 0 & E\bar{B} = 0 \\ a\bar{d} = 0 & b\bar{d} = 0 & C\bar{D} = 0 & d\bar{c} = 0 & e\bar{c} = 0 \\ a\bar{e} = 0 & b\bar{e} = 0 & c\bar{e} = 0 & D\bar{E} = 0 & e\bar{d} = 0 \end{array}$$

This universe may be described as a pluralistic universe with one character unconditioned, and conditioning a monistic world within it.

Four laws only are neither included in this group nor inferable from it. These are the four laws in which a appears in the conclusion, namely $b\bar{a} = 0$, $c\bar{a} = 0$, $d\bar{a} = 0$ and $e\bar{a} = 0$. On referring to the table of deletions it proves that these are the only laws denying the possibility of 6, or $\bar{a}bcde$. The universe, therefore, consists of two things

$$abcde \text{ and } \bar{a}bcde.$$

In this universe both things possess all four characters bcd , but one possesses a also, and the other lacks it.

Pluralistic Universe of mingled Law and Chance. VI.

Every character conditions some other, but not every character is conditioned by any other. Dual type.

A group of laws illustrating this case is the following:—

$$\begin{array}{ccccc} A\bar{B} = 0 & b\bar{a} = 0 & c\bar{a} = 0 & d\bar{a} = 0 & e\bar{a} = 0 \\ a\bar{c} = 0 & B\bar{C} = 0 & C\bar{B} = 0 & d\bar{b} = 0 & e\bar{b} = 0 \\ A\bar{D} = 0 & b\bar{d} = 0 & c\bar{d} = 0 & d\bar{c} = 0 & e\bar{c} = 0 \\ a\bar{e} = 0 & b\bar{e} = 0 & c\bar{e} = 0 & D\bar{E} = 0 & E\bar{D} = 0 \end{array}$$

This universe consists at most of the four things

$$\begin{array}{cc} abcde & \bar{a}bc\bar{d}\bar{e} \\ \bar{a}bcde & \bar{a}b\bar{c}de. \end{array}$$

A universe consisting of these four things may be described as a pluralistic universe with one character unconditioned, and conditioning two monistic worlds in chance connexion one with another.

Here b and c are always found together and likewise d and e ; but bc may be found without either de or a or both; and de without either bc or a or both.

Pluralistic Universe of mingled Law and Chance. VII.

Some characters both condition and are conditioned by some other; but some do not condition any other, and some are not conditioned by any other.

A group of laws illustrating this case is the following:—

$$\begin{array}{ccccc} \overline{AB} = 0 & b\bar{a} = 0 & c\bar{a} = 0 & d\bar{a} = 0 & e\bar{a} = 0 \\ a\bar{c} = 0 & \overline{BC} = 0 & c\bar{b} = 0 & d\bar{b} = 0 & e\bar{b} = 0 \\ a\bar{d} = 0 & b\bar{d} = 0 & c\bar{d} = 0 & d\bar{c} = 0 & e\bar{c} = 0 \\ a\bar{e} = 0 & b\bar{e} = 0 & c\bar{e} = 0 & \overline{DE} = 0 & \overline{ED} = 0 \end{array}$$

This universe consists at most of the six things

$$\begin{array}{ccc} & abcde & \\ \bar{a}bcde & & \bar{a}bcde \\ abc\bar{d}\bar{e} & & \bar{a}bc\bar{d}\bar{e} \\ & \bar{a}\bar{b}cde & \end{array}$$

A universe consisting of these six things may be described as a pluralistic universe embracing a monistic world in chance connexion with other characters all entering into law but some incompletely.

Among these possible things, a is always found with b and b with c ; likewise d always with e and *vice versa*. But a thing possessing either ab or c may be found either to possess or lack both d and e ; and a thing possessing d and e may be found either to possess or lack either a , ab or abc . The connexion of the two groups of characters ab and c , and de , is again, as is commonly said, fortuitous.

Pluralistic Universe of mingled Law and Chance. VIII.

Some characters both condition and are conditioned by some other; but some neither condition nor are conditioned by any other.

A group of laws illustrating this case is the following:—

$$\begin{array}{ccccc}
 \overline{AB} = 0 & \overline{ba} = 0 & \overline{CA} = 0 & \overline{da} = 0 & \overline{ea} = 0 \\
 \overline{ac} = 0 & \overline{BC} = 0 & \overline{cb} = 0 & \overline{db} = 0 & \overline{eb} = 0 \\
 \overline{ad} = 0 & \overline{bd} = 0 & \overline{cd} = 0 & \overline{dc} = 0 & \overline{ec} = 0 \\
 \overline{ae} = 0 & \overline{be} = 0 & \overline{ce} = 0 & \overline{de} = 0 & \overline{ed} = 0
 \end{array}$$

This universe consists at most of the five things

$$\begin{array}{ccc}
 & abcde & \\
 abc\overline{d}\overline{e} & & ab\overline{c}\overline{d}\overline{e} \\
 abc\overline{d}e & & ab\overline{c}d\overline{e}
 \end{array}$$

A universe consisting of these five things may be described as embracing a world together with some chance characters.

In this universe *abc* will always be found characters of the same thing but *d* may be found in a thing either possessing or lacking either *abc* or *e*, and *e* in a thing either possessing or lacking either *abc* or *d*. In whatever thing the characters *d* and *e* are found, whether together or with *abc* or both, their connexion with each other or with *abc* is again fortuitous.

The laws whose presence or absence, complete, or, in various selected ways, partial, has determined these eight types of limited universe, have been conceived to be simple laws; that is, propositions of the form if *x* then *y* in which *x* and *y* are results of single processes of abstraction, or simple characters. *x* and *y* may also signify results of multiple processes of abstraction, or complex characters, whether compound, as *ab*, or alternative, as *a* or *b*. Hence, conditional propositions, or laws in general, may take any of the following forms:—

$$\begin{array}{ccc}
 \text{If } ab \text{ then } c & \text{If } a \text{ then } b & \text{If } a \text{ or } b \text{ then } c \\
 \text{If } a \text{ then } bc & & \text{If } a \text{ then } b \text{ or } c \\
 \text{If } ab \text{ then } c \text{ or } d & \text{If } ab \text{ then } cd & \text{If } a \text{ or } b \text{ then } cd \\
 & \text{If } a \text{ or } b \text{ then } c \text{ or } d &
 \end{array}$$

and so on for larger compounds, or alternatives; and the alternatives may be understood either with the proviso "or any two or more" or with the proviso "and not any two or more".

The investigation of types of universe determined by complex laws has been unnecessary for the purpose of the foregoing discussion. The different things possible in a limited

universe are divisible into two classes, one consisting of the thing lacking no character, the other of the things lacking one or more. Hence, the following four different types of limited universe are possible: (a) that consisting of all the possible things; (b) that consisting only of the thing lacking no character with a selection from the things lacking one or more; (c) that consisting only of the thing lacking no character; (d) that consisting only of one or more of the things lacking one or more characters. Representatives of all four of these types have been reached by the foregoing discussion of simple laws alone. The supposition of the absence of all has resulted in universes of types (a) and (d)—(I.). The supposition of the presence of all has resulted in universes of type (c)—(II. and III.). The supposition of the presence of some only has resulted in universes of type (b)—(IV. to VIII.). Thus, for the purpose of the study of the different possible universes of Law and Chance the consideration of simple laws has sufficed. The investigation of complex laws would give no other types, for no others are possible, fruitful as that investigation might otherwise prove to be.

II. LAW AND CHANCE IN THE UNIVERSE.

Any assertion as to what will happen in future expresses a choice. If the assertion is a generalisation from what has happened, the choice is that the future shall resemble the past. *As it has been, so it shall be.* Hence, if at any moment the conditional proposition If A then A' is based on experience, it contains both an association of ideas due to the past, and a fiat upon them for the future. Every law of nature, so called, has its share of enactment by man.

The fiat makes of A and A' what is called a thing. There shall be nothing in the universe displaying the character A which does not also display the character A'. The conditional proposition thus limits the variety of possible things.

The association may present its component characters in one or another relation in time or space; as simultaneous or successive, near or remote. The law reached by any given generalisation from experience, will accordingly be a special case of the conditional proposition, If A then A'; thus If A then A' at the same time; If A then A' at another time; and likewise in the instance of spatial characters, If A then A' at that point; If A then A' elsewhere; the when and where of the conclusion being determined by the memory on which the fiat is based connecting it with its condition.

Considering only laws based on memories of the sequence

of the characters they unify, the fiat may take either of two forms. Either the later shall happen, if the earlier happens: or the earlier shall have happened, if the later happens. In both cases the earlier character is spoken of as "producing" the later; and in the first case the two are called respectively cause and effect. Symmetry of nomenclature might seem to demand that similar terms should be applied also in the second case. But while the two fiats may be assumed of equal theoretic value the first alone has practical value as a guide to action. The title of cause is accordingly given by common usage only to a character which invariably produces another and is denied to a character which is invariably produced by another. Causation is conceived as a one-sided relation, subsisting between past and future, and not between future and past.

In the form of the proposition, "Every character has a cause and every character an effect"—the fiat establishing law takes on wide generality. It may even be thought to include the fiat as an event like any other. The will is then conceived to be, in the usual phrase, "governed by law"; every choice, or volition, to be an instance of a conditional proposition. Yet such a notion involves a logical contradiction. The fiat itself is other than the material to which it is applied, and to include it therein is to affirm it other than itself. The doctrine called Determinism as thus understood, is a logical absurdity.

The doctrine affirming miracles as exceptions to law is also irrational. The definition asserts by the first noun the intermittence and by the second noun the unintermittence of one and the same sequence of events. Defined rationally, a miracle is the revelation of the non-existence of law where it was previously assumed. The word derives from the wonder of the revelation. From this wonder, especially when beneficent to man, issues the doctrine which gives the word its accent of sublimity. The so-called laws of nature are thought of as the product of a will moulding all things, as a man's will moulds some of them. In any apparent discovery of law, the human will is thought in harmony with the supposed universal will, which nevertheless may remake nature at any point as a man may remake any work of his own.

The widest possible generalisation of the notion of cause appears in the proposition—*Every character has an effect in every other character, and consequently a cause in every other character.* By this affirmation every character becomes a unity with every other. The universe is one thing. This is

the supposition regarding the presence of law in the universe numbered 2 above. Monistic universes II. and III. are two illustrations of it.

Some unity must be posited in the characters presented by a universe, if any purposes are to be carried out in it at all. In any attempt to execute an aim it is assumed that the volition will produce a character tending toward the aim. But only a tendency need be assumed. A memory showing that in most cases the volition reaches its aim may still be rationally taken as a guide to action. The fiat *As it has been so it shall be* might "pay" even on such a basis. Possibly the inerrant guidance assumed in the primitive notion of cause and effect as unconditional sequence is never to be enjoyed. Possibly causation in this sense is never discoverable. Nevertheless, it may still be held to exist; and whether it exists or not the modified notion of customary sequence retains practical value, notwithstanding its theoretic lack.

That all characters should be instances of cause and effect, at least in the modified sense, is not a presupposition of voluntary action, still less that causes and effects should be universal in scope. Some characters may have no effects, some no causes; and even if all have causes and all effects, these causes and effects may not be of all-embracing range. Conceiving the laws considered under supposition 3 above—that of the incomplete presence of law—to be laws of causation, all these alternatives are there made use of in developing various forms of pluralistic universe. In IV. all characters have causes and all effects, but none of the causes and effects are of all-embracing range. This universe illustrates the narrower of the two general fiats mentioned above. In V. and VI. *a* has an effect but no cause, and all the other characters have both causes and effects. In VII. *a* has no cause and *c* no effect. In VIII. *a*, *b* and *c* have each a cause and an effect, but *d* and *e* each neither cause nor effect. In these alternative forms of supposition 3, that is, in the absence of the wider of the two extended fiats named, whether the narrower is present or not, the universe is in reality the multiplicity it appears to be. It is not only proximately but ultimately many things.

The contrary belief—that the universe is fundamentally one while superficially many—has in its theoretic favour only the dignity of antiquity. It was affirmed in the ancient East, has since been reaffirmed in European philosophy, and is the basis of the science of the present. Nowadays the wish of practical men to control all things has been father to the thought that all things are controllable. The fiat estab-

lishing the universal reign of law, the fiat that makes the world one, is pressed upon philosophy in the creed called Monism at once by this new hope and by a perspective hitherto unfamiliar to the Occident and reaching at least into the shadows of early Hindu thought. Yet inclined as the present may be toward the principle of the all-embracing universality of law by its aid to science and by the glamour of its pedigree, there is nothing that speaks rationally for it. The two conceptions of the universe, Monistic and Pluralistic, which have emerged out of the conception of law, stand on precisely the same logical footing, neither being a conclusion of reason therefrom, but both acts of faith or unfaith therein.

A limited universe, as this phrase has hitherto been defined, is a universe made up of a certain number of different characters only. Such a universe may be conceived unlimited in duration. The characters being conceived limited, the possible combinations or orders¹ in which they can appear at any moment are also limited; and if at any moment all have happened, what happens thereafter will consist of repetitions of these orders.¹ The possible orders² in which these repetitions of orders¹ can occur will also be limited; and likewise if at any moment all have happened, what happens thereafter will consist of repetitions of these orders.² The possible orders³ in which these repetitions of orders² can occur will also be limited; but out of these, orders⁴ and higher can be formed without limit. Taking any two moments between which all the ordersⁿ have occurred, what follows the later may or may not be a repetition of the single orderⁿ⁺¹ in which the ordersⁿ have already occurred. The supposition that at some moment this will actually be the case, is the doctrine of Eternal Recurrence. This doctrine hence appears not a conclusion of reason from the conception of a universe limited in character and unlimited in duration, but a dogma, or faith—a magnified form of the fiat *As it has been so it shall be*.

It proves that this faith rests on the assumption regarding causation spoken of above as the widest possible; namely, the assumption that every character has an effect in every other character and consequently a cause in every other character; otherwise expressed, that the universe is completely governed by causal law and is therefore one thing. For if every character is a cause of every other, each is always followed by every other after the same lapse of time. Hence, taking any character it will always reappear after the same period; and taking the content of any moment in characters, the same content will always reappear after the same period.

Thus, in course of time, the universe will present a series of recurrences of the same series of events and, if unlimited in duration, the recurrences will be eternal. On the other hand, if any given character is not the cause of any given other, the other will have no period of sequence upon it, and will, if it appear, interrupt any recurrence of characters produced by the action of causation embracing the first. If then the universe is not completely governed by causal laws, that is, is Pluralistic and not Monistic, not one thing but many, it will not present an Eternal Recurrence.

Hence, conceiving the laws concerned in the eight types of universe above developed as laws of causation, there will be no recurrence in any but the two monistic types numbered II. and III., and the monistic worlds contained within others.

The limited pluralistic universe I., of no laws at all, is usually spoken of as a "chance" world, or a world of "pure chance". The term "chance" is here used in the sense of "uncaused" and tacitly refers not to the world as a whole but to the characters it contains. Considered as a whole every universe is a chance world, being by hypothesis uncaused. These phrases are an instance of the pitfalls already referred to, awaiting discourse about chance.

The five characters displayed by universe II., and by the worlds supposed, form a chain of cause and effect in which the final effect causes a return of the initial cause. Such a universe, supposed to begin with the appearance of any one of the five characters, presents thereafter a perpetual return of the same series of simple events in the same order.

The monistic universe III. presents an eternal recurrence of another type. On working out the contents of successive moments, it appears that beginning with any one of the characters such a universe would present a recurrence of the same series of complex events which might at any given moment include all the characters.

Among the pluralistic universes of partial law, that numbered V. exhibits characters of which one is uncaused and the remainder form a monistic world which it brings into permanent existence. This world would exhibit an eternal recurrence of the simple type, subject at any moment to readjustment by the reappearance of the uncaused character, making possible complex instead of simple observations. This type thus serves to illustrate two conceptions; first, that of a first cause setting the world in motion and thereafter leaving it alone; and, again, that of a Providence taking part at one and another moment in its history. The two things of which the universe consists are the uncaused cause considered as one with its work, and the work considered apart.

Pluralistic universes IV. and VI. both posit two monistic worlds, or worlds completely governed by law, in chance or uncaused connexion one with the other. They serve to illustrate the conception of the co-existence of mind and matter, a material world completely subject to its own laws, and a mental world completely subject to its own, but neither acting upon the other. IV. illustrates the conception of the two as without causal connexion because they are faces of one reality. In VI., both being brought into existence by a common uncaused cause, the conception is illustrated which assumes a pre-established harmony between mind and matter.

Pluralistic universes VII. and VIII. serve to illustrate the view which despairs of understanding the universe because believing that some events at least are due to fortune, that is, pure luck; if some are not also purely fugitive, that is, do not also disappear without leaving any trace that they have ever been; and *vice versa*.

It is to be admitted, in a final word, that a complete discussion of Monism and Pluralism is beyond the scope of a logical study of law in nature, or the world of possible scientific observation. The universe of characters whose own single or multiple character can be debated because the subject matter of the debate is visible to every debater, is not all that any debater believes to exist. Each of them believes in the existence of invisibles with whom he debates. These "other people" no one ever sees. Their existence cannot be verified in the scientific sense of the test by observation. What can be the ground for such a belief? One only appears. This sole ground is a sense in which each debater is at once a visible and an invisible including all the others. This invisible makes one thing of all that exists. Yet in the sense of the visible each remains one thing by itself. In the widest possible interpretation, all that exists is, to the belief of each believer in others, at once ultimately one and ultimately many. Monism and Pluralism here unite, neither a more fundamental view of the universe than the other. The two doctrines thus understood are not opposed descriptions of the universe of scientific observation, but descriptions of all that exists in the two senses—namely, to the all-embracing and to the each-embraced—in which that phrase is inevitably taken by every one.

What becomes of the conclusions of this study, if the universe be conceived unlimited in character? A universe limited in character is one in which the process of abstraction has only a certain number of different results; otherwise stated, one in which a series of observations, each differing from every other, is possible, to which it is impossible to add.

A universe unlimited in character is one in which the process of abstraction has any number of different results; otherwise stated, one in which any series of observations, each differing from every other, can be added to. On the first supposition a body of material is before the mind and its constitution may be supposed of one or another type. On the other supposition no such body of material is before the mind. The phrase "a universe unlimited in character" is a form of words for the possibility of observing more characters than any observed. A universe in this sense does not exist. As a whole it is no-thing. Of no-thing, of a thing that does not exist, contrary assertions are both false. The moods of mysticism appear to be a compound of the perception of this truth about the universe when conceived as unlimited in character, and of awe in the sight of its immense charm as far as perceived. To every assertion about Brahman, or the Atman, the Hindu philosopher replies "*It is not so*"; and his disciple is irrational only if, by a slip, he denies his master's assumption and to the affirmation "*Brahman is no-thing*" replies again "*It is not so*". The Western mystic is misled only by the immense lift, perhaps the immense incitement to heroism, there is in the idea that whatever is perceived more can be perceived. The real charms of what any one can experience, fill the mind with fancies of the like, shutting out all that no one willingly experiences for its own sake. In this attitude of perfect content with all that exists, mysticism is, to non-mystics, plainly in error, and this is the only evident error in the doctrine. Its evident truths are that the process of abstraction is not all that happens, and that value is not intrinsic to it. The murmur that names mysticism is an utterance of joy over emancipation from thought.

Returning to the proper subject of this study—to nature or the world of scientific observation—all three of the opinions drawn up at the outset in opposition to their current contraries prove to commend themselves on one or another account.

Not everything is governed by law. This conclusion renounces the universal fiat, and takes the world of scientific observation at its face value as a scene of mingled uniformity and variety.

The will, for example, is free. Any other conclusion has appeared irrational.

The world is in reality many, and only in appearance one. This conclusion is a corollary from the first.

VI.—CRITICAL NOTICES.

Aristotle's Metaphysics. A revised text with Introduction and Commentary. By W. D. Ross. Oxford: Clarendon Press, 1924. 2 vols. Pp. clxvi, 366, 560.

A REVIEWER'S first duty in commenting, however briefly, on Mr. Ross's long-promised edition of the *Metaphysics* is to congratulate Mr. Ross and the Clarendon Press on the accomplishment of what must have been a very laborious task, though no doubt a labour of love, both to the editor and to every one responsible for the printing of the book. To say nothing of the burdensomeness of the work to be done by printers and press-readers, the editor's own part of the business must often enough have been wearisome to the most zealous of Oxford Aristotelians. There are parts of the *Metaphysics* which fascinate from the nature of their subject-matter, like the great argument from motion to the "first Mover," and in a lesser degree, the account of the "spheres" and their movers in book A: there are other parts which provoke our curiosity, like books M-N, which set us the interesting, if tantalising and not wholly soluble problem of deciphering the real lines of the Platonic derivation of the number-series from a series of criticisms vitiated at once by obvious inability to understand and by the pardonable desire to score polemical points. Other parts have an historical interest (A and some chapters of M), and yet others (like the statement of *ἀπορίαι* in B), attract because we find in them a lucid statement of what are still the outstanding problems left over to "metaphysics" when the sciences have had their say. But it would be hard to pretend that the discussions of the meanings of *ἐν* and *ἐκ* and the different senses of the distinction between potential and actual, which make up the main substance of these discourses on "first philosophy," are not full of tiresome *longueurs* and repetition, or that the perpetually recurring necessity of trying to reconcile what appear to be flatly contradictory deliverances on the same problems, does not end by exasperating a student of ordinary patience. Indeed, one might be tempted to say that there is perhaps only one famous work on metaphysics quite so irritating to the reader, the *Critique of Pure Reason*. All the more gratitude is due to the rare commentator who can annotate and discuss either of these books—if books they can be called—without ever losing his patience. As for the part taken in the production of these volumes by the staff of the Clarendon Press it may be said once for all that it is, as

usual, admirably executed. I have noted a few minor errors in the printing which do not appear to have been recorded but they are singularly few for a work of such length presenting so many typographical difficulties.

Perhaps the most valuable service Mr. Ross's work renders to Aristotelian study is that which is least obtrusive, the construction of his text. He has all through had the advantage over former editors of working with full knowledge of the readings of the important MS. now called J, which appears to be as valuable for the *Metaphysics* as Prof. Joachim had already shown it to be for the *de Generatione*, and has thus often been enabled to decide between readings which had seemed to be equally supported by the evidence of the other two chief MSS., A^b and E. There has been also a careful re-examination of the collations of earlier editors with the not unexpected result that on the whole Bekker's reports have been remarkably confirmed where they have been contradicted by his successors. The frequent use made of the old Latin translation (Γ) as virtually equivalent to MSS. testimony is another valuable feature of the work. Still more has been done for the provision of a correct text by following the example set by Bywater in his edition of the *Ethics* and making the punctuation—always a weak point with Bekker—a real guide to the structure of the thought, and thus avoiding the standing temptation to excisions and emendations which only obscure the author's argument. Mr. Ross's own emendations are commendably few and seem to me to be usually made with sound judgment, good knowledge of Aristotle's *usus loquendi* and proper attention to palæographical probabilities. Of course I do not mean that they will all commend themselves to every reader; I have myself noted some cases where I think a change introduced into the text might perhaps more safely have been relegated, as a suggestion, to the *apparatus criticus*, and a few where I think I could make out a case for rejecting the editor's proposals. But I do not think it too much to say, after a pretty careful comparison with Christ's second edition, that Mr. Ross's text is far the best now in circulation. It is, I think, clearly nearer to what Aristotle must have written than that of Bonitz, though, as Mr. Ross truly says, Bonitz has done more for the text and interpretation of the *Metaphysics* than any editor or commentator before or since. It will not be expected that I should occupy the pages of MIND with detailed discussion on textual points such as would only be in place in a journal officially devoted to classical philology. I shall therefore speak in the main of the more general issues raised in Mr. Ross's *Introduction*, making some briefer reference to the treatment of one or two points in the detailed *Commentary*.

There is one topic which inevitably has to be dealt with in an edition of the *Metaphysics*, that of Aristotle's relation to Plato, on which I should like to say a few preliminary words, in order to get it out of the way. Mr. Ross includes in his discussion of the subject an issue which I should have considered quite secondary for an editor of

the *Metaphysics*, that of the real position of Socrates in Greek philosophical thought and the interpretation of Aristotle's references to Socrates. In this matter he appears to regard himself as on the whole an opponent of the present writer and of Prof. Burnet. I cannot answer for Prof. Burnet, but for my own part, my feeling is that I am so glad to find Mr. Ross as moderate in his objections as he is that I look on him more as a friend than an enemy. I will at once concede to him that the attempted identification, made in my *Varia Socratica*, of the "friends of Forms" mentioned in the *Sophistes* with Megarics is quite mistaken. We all live and learn, and if I had known the Commentary of Proclus on the *Parmenides* properly when that volume of essays was written, the mistake would never have been committed. I should now say, with Burnet, that the reference must be, as one would expect in the mouth of a "stranger from Elea," to Italian Pythagoreans. On a second point, Mr. Ross seems to me to attach undue importance to what I have never regarded as more than a side-issue. He devotes much learning to a defence of the alleged presence in Aristotle of a distinction between *Σωκράτης*, the historical philosopher, and *ὁ Σωκράτης*, "the Socrates" who is a personage in Plato's dialogues. To satisfy myself that I have been shown to be wrong in disputing the presence of such a distinction in Aristotle, I should need to compare Mr. Ross's argument very carefully with that attempted on the other side in *Varia Socratica* in minute detail, and this is a task which circumstances at present prevent me from undertaking. But I may at least observe that if Mr. Ross's argument on *this* point be accepted without reserve, it still leaves it an open question whether Aristotle ever intended to hint at any difference at all between the teachings of the actual Socrates and those of "Socrates in Plato". It would be possible to indicate that certain statements about Socrates come from the Platonic dialogues without feeling any doubt that they are substantially historically correct. What needs to be proved, if the substance of views like Prof. Burnet's or my own is to be refuted, is that Aristotle had independent sources of information about Socrates and that, on the strength of this information, he doubted or denied the account of the thought of Socrates given by Plato. I do not see that Mr. Ross has done anything to establish either point. As to the "independent" sources, he speaks of Xenophon and oddly calls him an "authority" on the question whether Socrates believed in the *ἰδέαι*. He also suggests that Aristotle would, no doubt, hear many reminiscences of Socrates from Plato in conversation. Now no one denies that Aristotle had read the *Memorabilia*; I myself actually suggested the emendation of one passage in that work on the strength of an Aristotelian reproduction of it. But he does not seem to have drawn anything beyond a couple of passing references from Xenophon's book, whereas nearly everything he says about Socrates and his views and methods can be found in the Platonic dialogues, and it is hard to see how the fact that Xenophon says nothing about a metaphysical doctrine can afford

"authority" for denying it to Socrates in the face of Plato's standing representations. Socrates would not be likely to talk about *ιδέαι* to *Xenophon* in any case. Whether Plato, in the last twenty years of his life, was in the habit of entertaining the young recruits of the Academy with personal recollections of his youth, of course no one can say. Personally I do not think it likely when one remembers both what Plato's known interests at that period were, and also that the young men of Aristotle's age would have no special reason for any deep interest in the matter. Why should a young man from Stagirus, born fifteen years after the death of Socrates, be specially anxious to listen to these reminiscences? Certainly the tone of Aristotle's references does not suggest that he felt any very deep interest in Socrates, as it was not likely that he should in a man born nearly a century before himself, who had written nothing. So again, Mr. Ross makes a verbal point when he calls attention to the fact that once, in Book M, Aristotle speaks in the singular of "the man who first asserted the existence of the *ιδέαι*," clearly meaning Plato. But the point is, I submit, purely verbal. Of course Plato is called "the man who first said it," because he said it in writing; he did introduce the doctrine Aristotle is thinking of into philosophical literature. Since Socrates wrote nothing and the first Pythagoreans appear to have written nothing either, this leaves the question whether Plato is romancing when he makes not only Socrates but Timaeus talk about *ιδέαι* unaffected. Suppose, for argument's sake, that Socrates and Timaeus both taught exactly what Plato makes them teach; still it would be true that we only know what they taught from Plato's statements about the matter, and this sufficiently explains Aristotle's phrase, especially as his purpose in the context is merely to contrast Plato with some of his successors. What would be more to the point would be a definite statement that Socrates never really "said that there are *ιδέαι*," and it is notorious that no such statement is ever made by Aristotle.

I may perhaps mention here one or two matters arising out of the Commentary on passages where Plato and his doctrines or those of his successors are dealt with.

(1) In commenting on the well-known contention of books A and M that the arguments of the Platonists for their *εἶδη* bring in "the third man," Mr. Ross is content to follow the tradition which interprets this as equivalent to saying that these arguments lead to the "endless regress". I wish he would reconsider the point. I do not think it *a priori* probable that Aristotle means this, for a very simple reason. It is his favourite objection to the views of opponents to say that they lead to the "regress"; yet when he is insisting on that point, he *never* alludes to the "third man" at all, unless the two references to the "third man" in the polemic against the *εἶδη* are to be understood as Mr. Ross understands them. The obvious inference is that the "third man" probably refers to something else. Again it is simply not true that the argument against the *εἶδη* ascribed by Alexander to Polyxenus has anything

to do with the "regress". The argument is simply that "man" may be predicated not only of the Form and again of a known individual, but in still a third sense, and Polyxenus argues that this "third" man is ignored by the theory of Forms. Alexander, on his own account, supposed that Aristotle's "third man" objection to the Platonists has to do with the "regress," but this is a further exegesis of his own, which may or may not be correct. I believe myself, as I have urged in a discussion of the question before the Aristotelian Society, that none of the references to the "third man" in Aristotle have anything to do with the "regress," and in particular that the point hinted at in *Met. A* and *M* is the same as that made in *Met. K*, viz. that there ought to be a "man" intermediate between the Form of Man and individual men of flesh and blood, exactly as there is a "mathematical circle" intermediate between the Form of Circle and visible circles. The complaint is that the Academy admit the "third" circle, but not the "third" man or horse; to be logical they should admit all or none. This may be a wrong interpretation of Aristotle, but at least it is suggested by what we know of the argument of Polyxenus, and I should have been glad to know Mr. Ross's opinion of such a suggestion.

(2) It occurs to me again that in dealing with the authorship of some of the views about number discussed in *M* and *N*, Mr. Ross is perhaps erring a little, though in very learned company, in his very definite attribution of certain views to Speusippus and to Xenocrates respectively. No doubt Aristotle is naturally specially interested in certain views because they had been held by men who were his own early associates. But can we speak as though such views were confined to, or had been originated by, these men? The question arises in particular in connexion with the theory that there is only one kind of number, the "mathematical". It is fashionable to say that this is the "view of Speusippus," and it is no doubt true that he held it. But it is another thing to write as though Aristotle means Speusippus only when he talks of those who hold this theory. The explanation of "Alexander" was that the view is Pythagorean, as, in fact, it must have been the view of those Pythagoreans who said that things are "likenesses of numbers" rather than that they *are* numbers. When we remember that Speusippus wrote about the *Pythagorean Numbers*, it is hard not to suspect that he was accepting a Pythagorean doctrine rather than originating one of his own, and personally I strongly suspect further that certain passages in *Met. N*, where details about views of this kind are given, are actually quoted by Aristotle from the writings of Speusippus, and even that Speusippus is likely to have been his authority for a good deal of what he says about Pythagoreans and Pythagoreanism in the *Metaphysics* and elsewhere. I make the suggestion simply for what it may be worth, in view of the fact that it is so commonly assumed that Aristotle must have been completely at the mercy of Aristoxenus in these matters. All that I want to infer is that "Alexander" has

perhaps been treated a little too cavalierly in some places of Mr. Ross's Commentary. It is at least possible that he has preserved traditions from the earlier exegetes which have solid truth behind them, and that it is unsafe to credit Speusippus in person with *all* the views and arguments ascribed by Aristotle to those who recognise "mathematical number" only.

(3) I could wish Mr. Ross had made it a little clearer how far he thinks it possible to reconstruct from *Metaphysics* M the real Platonic doctrine about numbers and the "mathematicals". As he fully acknowledges, Aristotle's criticisms to a large extent miss fire because Aristotle himself made the fatal error of denying the existence of "ideal" number and asserting that of "mathematical" number. It is clear enough that the integers, the only numbers in which Aristotle believes, have precisely the character he ascribes to Plato's "ideal" numbers, and that nothing has the character he attributes to "mathematical number". Now, since this is so, there is a possibility that imperfect sympathy has perverted not only Aristotle's criticism but his report of the theories he is criticising. (One cannot help suspecting that this has been the case particularly with Xenocrates, who comes off worst at Aristotle's hands. He is accused of holding a doctrine of "indivisible lines," in the sense of minimum lengths, and it is then an easy task to convict him of "treating geometry ungeometrically". But an "indivisible" line is not necessarily a line of minimum length, and it is also obvious that there is a sense in which the "complete" straight line *is* indivisible. If C is a point intermediate on a straight line between A and B, it is strictly true that there is not a straight line AB made up by "addition" of two straight lines AC, CB; there is only one straight line in question, though there are the two intervals on it, AC, CB, and these *intervals* can be "added" to form a third, AB. What is divisible, or has magnitude of divisibility, is the relation of distance, not the entity we call a straight line. This may suggest that possibly, after all, Xenocrates was not quite the simpleton he seems to be when we only hear Aristotle's account of his meaning.) Yet, on the other hand, it would not be surprising if the very progressive mathematicians of the Academy were, so to say, experimenting with ideas which really demand long employment for their clarification, and consequently were employing at once formulæ which are not strictly compatible with one another. For example, if Aristotle's references to their procedure do them no injustice, their method of working out the derivation of the integers from the One and the "Dyad" was sadly inconsistent with their account of these principles. Is the inconsistency a real one, such as must be expected in the tentative creation of a new method for the first time, or is it a mere appearance, due to misconception on Aristotle's part? Again, are we in a position to say definitely what were the "mathematicals" regarded by Plato as "intermediate"? Some of the references, notably in K, would suggest that they are all geometrical (such things as pairs of "conjugate diameters," similar

triangles, and the like); yet in M and N, Aristotle definitely makes Plato teach the existence not merely of "mathematicals," but of "mathematical" numbers, which differ somehow from the "ideal" numbers, i.e., the integers. Are the μαθηματικά identical with the μαθηματικοὶ ἀριθμοί or is there a difference? If there is, may it be that what Plato really has in mind are what we should now call the "real" numbers, and that he is anticipating the very modern problem of deriving the "real number" series from the series of integers, a problem not, of course, soluble with the very imperfect resources of the Academy. (That it had presented itself is shown by such a passage as *Epinomis* 990c 5-996a 1, where the whole point is that such "numbers" as $\sqrt{2}$, $\sqrt[3]{2}$, have to be recognised and to be logically derived somehow from the integer-series.) Mr. Ross is strictly within his rights as a commentator on the *Metaphysics* in ignoring questions of this kind. Yet I wish he had treated one or two of them as generously as he treats the astronomy of Eudoxus in his comments on A 8.

(4) A minor point is that I think Mr. Ross has occasionally forgotten the light which is thrown on some passages of the *Metaphysics*, as on many, e.g., in the *Sophistici Elenchi* and the *Ethics*, by reference to the Academic collections of "definitions" which still survive in part in our Plato MSS. It is always a good rule, when Aristotle is found citing or criticising a definition of unspecified *provenance*, to look at once for it, or an equivalent, in the "Platonic" *ῥητοί*. The *Metaphysics* in particular does not make frequent use of these "definitions," but there is one quite clear case in the discussion of "privation" at K 1061a 25, where an illustration is based on a definition of the δίκαιος as καθ' ἑξὲν πειθαρχικός τοῖς νόμοις, for which [Plato] *Def.* 411e should have been cited. If it is not ungracious to "ask for more" where we have already been given much, I would say that it is a pity Mr. Ross has not set himself to supply systematically references to the innumerable passages where actual terms of language show that Aristotle is consciously echoing or commenting on specific phrases in Plato. Many of the references are naturally given, but I think even more of those I had myself noted are missed, especially where the allusion is to Plato's ripest masterpiece, the *Laws*. In one case Mr. Ross has missed a very amusing little verbal rejoinder which deserves to be recorded, as I am not sure that attention has yet been called to it. In *Epinomis* 987b 8, we are told that the "eighth circle which may most properly be called the κόσμος, revolves in the sense opposite to that of the other seven—carrying with it the others, as it might seem to those who know only a little about these things"—an urbane way of denying that "double motion" theory of the planetary movements which is fundamental in Aristotle's cosmology. (Burnet's insertion of a negative with ἀγών seems to me simply to take the characteristic gentle "sting" out of Plato's language.) It seems pretty clear that the mild snub administered here is meant for exactly such persons as Aristotle, members of the Academy who

are satisfied with the astronomy of Eudoxus just because they are not enough at home in the subject to appreciate Plato's reasons for dissatisfaction. Now when we turn to Aristotle's famous chapter about the "movers" of the planets, we find him in turn saying that "it must be plain even to a beginner" (τοῖς καὶ μετρίως ἡμέτεροις, A 1073b 9) that every planet has several motions—the very thing the *Laws* and *Epinomis* deny. It seems plain that Aristotle felt and resented the suggestion of the *Epinomis* and that he was careful to repay it in kind. (This should be added to the other considerations adduced by Jaeger to show that the publication of the *Epinomis* had something to do with the crisis in Aristotle's attitude to the Academy. The part of A 8 in which Aristotle's quip occurs is not affected by the grounds given by Jaeger for believing that the long account of the fifty-five spheres and their movers is a later insertion in the text of A. The Aristotelian *innuendo* and that of the *Epinomis* will be nearly contemporary, and I think it would not be hard to make out a strong case for the view that it is Aristotle's remark which is a rejoinder to the other. This would tell in favour of the genuineness of the *Epinomis* and against Jaeger's curious view that the chronological order is *Laws*, Aristotelian *περὶ φιλοσοφίας*, *Epinomis* as an Academic rejoinder to Aristotle.)

In the elaborate Introduction prefixed to the first volume, the most interesting section is perhaps that which Mr. Ross has devoted to a careful study of the theology of A, and the closely connected doctrine of the *de Anima* about the *intellectus agens*. I find myself wholly in accord with all that Mr. Ross has to say about the singular contradiction between Aristotle's insistence in both *Metaphysics* and *de Anima* on the view that νοῦς only apprehends itself, by a sort of side-stroke, in apprehending other things and his equal insistence on the theory that God apprehends Himself directly and apprehends nothing else. If there is any way of harmonising these positions, it seems at least clear that Aristotle has not given any hint of what he supposes that way to be. One might be tempted to suppose that the inability to apprehend itself directly only attaches to νοῦς when it appears in conjunction with a finite organism, and falls away in the case of a νοῦς which is "separate". But the exegete of Aristotle, if he has a conscience, cannot help remembering that Aristotle offers no suggestion of this kind. When we are told that νοῦς only apprehends itself κατὰ μετέληψιν τοῦ νοητοῦ, there is not a word to show that this limitation is thought of as accidental; it seems to be meant that it is of the very nature of thinking to be a process directed on an object other than the thinker. I cannot help wondering, for my own part, whether Aristotle had ever thought out the implications of his doctrines; whether, in fact, his belief in a God who is the object of his own thinking, and the only object of it, is not really a personal "faith" not integrated with the believer's "science". The science, assuming the reasoning of A 7 to be sound, warrants belief in a "first Mover," but does it warrant *any* pronouncement

on the character of the Mover which goes beyond the statement that he is an eternal *ἐνέργεια*? (By the way, what is the warrant for speaking of God and the other unmoved movers as "forms"? Does Aristotle *ever* call them so? And are there not obvious difficulties raised by the use of the phrase? Would it not be better to speak, as the Middle Ages did, of "separate *intelligences*"?)

Perhaps it is not so easy to be sure that Mr. Ross is right when he tries to work out the theory of the unmoved movers in detail. His argument against regarding the "movers" as the *ψυχαί* of their spheres appears conclusive. But I gravely doubt whether there is any ground for the suggestion that the "movers" are themselves "actuated by love of the first mover". The more natural interpretation would be that each mover, like the supreme mover, is an intelligence which has only itself for its object. Otherwise, no mover but God will really be an "unmoved" mover at all. Mr. Ross's attempt to recommend his view by appealing to the doctrine of *ἐληγορη* and drawing the inference that the planetary movers, like angels in the Augustinianism of the thirteenth century, are not wholly "pure" forms is ingenious, but in view of the unqualified way in which all the fifty-five movers are said to be "unmoved," I do not believe it will work. St. Thomas, who denied the presence of "intelligible matter" in the angels, seems to me nearer to Aristotle's thought, though he is, of course, far from drawing what seems to me to be the true Aristotelian conclusion, that the movers know of nothing but themselves. If Λ 8 is a later interpolation into a theory which originally recognised only a single "unmoved mover," it may well be inconsistent with the passages of H, Δ , Z, on which Mr. Ross relies.

Again, it seems to me more doubtful than to Mr. Ross whether we are to think of the "spheres" as having "souls" at all. If they have "souls," the souls play no part in the cosmological theory, and Aristotle never mentions their existence. I should have thought it more probable that we are to take the definition of *ψυχή* as the "first entelechy" of a *σῶμα ὀργανικόν* quite strictly and to say that the spheres are something better than "organic" bodies, and consequently have something better than souls, *viz.*, their *movers*. I do not think it is an objection to this view to urge that it makes Aristotle's *κατὰ ὡς ἐρόμενον* a mere poetical metaphor. We find it one, just because we have, for good or bad, been so profoundly influenced by the Cartesian subjectivisation of metaphysics. But it is another question whether Aristotle would have felt that in speaking of the complete and everlasting response of the "first heaven" to the presence of God, he was using *mere* metaphor unless the "heaven" be supposed to have a "consciousness". We must not without definite warrant impart to a Greek thinker our modern sense of the significance of consciousness. We need to be on our guard against this tendency most of all in dealing with the thorniest of all problems in Aristotelian philosophy, that of the meaning of the few lines of the *de Anima* which speak of

the *intellectus agens*. Mr. Ross has inevitably to discuss this problem, and he does so with a good deal of caution. Thus he, in my opinion rightly, decides against the identification, once popular among Aristotelians in Oxford, of the *intellectus agens* with God. I am not equally clear whether it would not have been well to abstain from answering the question whether Aristotle's language about the imperishability of the intellect amounts to a recognition of "personal" immortality. It seems to me that the few words of the *de Anima* are too vague to enable us to say anything on the matter except that if Aristotle did believe in a personal "life to come," he cannot have been deeply interested in it. If the question of exegesis is to be discussed at all, I think it a little unfortunate that, while account is taken of some of the interpretations which have been offered, Mr. Ross should have been completely silent about the interpretation defended with ability by Themistius and the further elaboration of what is substantially the same interpretation by St. Thomas. A consideration of these interpretations would at least have suggested that it is not even certain that the intellect declared by Aristotle to be "imperishable" is the *intellectus agens*; it is not impossible that he means to include the so-called *intellectus possibilis* as well. Whether he does or not, I feel sure that Thomas's *de unitate intellectus* is a contribution to Aristotelian exegesis which cannot be ignored without serious loss (and I would say the same of the commentary on the third book of the *de Anima*). There is no justification for assuming that whatever falls in the interval between Simplicius and Zabarella can be of no living importance to the modern interpreter of Aristotle.

I should like to commend very heartily Mr. Ross's pages in the *Introduction* on Aristotle's metaphysical doctrine, and the difficulties which beset its central feature, the conception of substance. I doubt whether the British student will find an equally full and judicious treatment of the subject anywhere else, and it is most desirable that he should be provided with something of the kind before he attacks the text of the *Metaphysics*, a work where it is more than usually difficult to "see the wood for the trees". There are, of course, points on which differences of opinion are possible. I do not feel sure that Mr. Ross has, for example, disposed of the view that the "categories" are a classification of the senses of the copula quite beyond all possibility of a rejoinder, or again that Aristotle's conviction of the reality of "contingency" is not a more important feature of his thought than Mr. Ross seems willing to allow. But these are matters which the specialists in Aristotelian philosophy may be left to settle for themselves. There can be no doubt of the balance and lucidity with which Mr. Ross expounds the different tendencies which meet in the complex Aristotelian treatment of substance, and if the conclusion of the whole matter remains a little obscure after all has been said, it is because Aristotle himself has left it so.

On the problems raised by the literary form of the *Metaphysics* Mr. Ross takes a reasonably conservative attitude. It is satisfactory

to find that he allows us to regard books ABFEZHOMNI as a single continuous discussion, and that he rightly insists that there is no reason to doubt the Aristotelian character of the four outstanding books αΔΚΑ. I am particularly glad that, like Jaeger, he recognises in the first half of K an authentic earlier treatment of the topics afterwards discussed more at length in BΓE. The only section of our text which appears to be in any sense "doubtful" is thus the second half of K, and, since that is a mere excerpt from the *Physics*, all that is doubtful about it is whether the excerpts were made by a pupil for his own purposes, or possibly by Aristotle himself. Mr. Ross has been helped in arriving at these gratifying results by the excellent work of Jaeger. To one who, like myself, can remember the days when Jowett could state in a lecture, without doing excessive violence to current opinion, that "the *Metaphysics* are a discussion by a later generation of Aristotelians of the views of a later generation of Platonists," it is a greatly comforting fact that European scholarship should be ending by restoring to us the confidence in the genuineness of our legacy from antiquity which it spent so much of the nineteenth century in trying to shake. It is good to be able now to believe in one Homer and one Aristotle.

A. E. TAYLOR.

Studies in the History of Political Philosophy before and after Rousseau. By C. E. VAUGHAN, M.A., Litt.D., formerly Professor of English Literature in the University of Leeds. Manchester University Press, 1925. [Two Vols. pp. xlv + 708.]

It is difficult to estimate the debt that Political Philosophy in our country owes to C. E. Vaughan. His great book on *The Political Writings of Rousseau* has been before the world for ten years. It had the advantage of his own hand in its publication. It is an honour to the University of Oxford that produced its writer and to the University of Cambridge which published it. Alone it would have established Vaughan's reputation as one of the most distinguished scholars and writers on Political Philosophy of our time.¹ We now have to acknowledge the two volumes of *Studies* in the same subject which may be said to have been the work of his life and of which the long Introduction to the *Rousseau* was only an excerpt. The first volume was left by him ready for the press. The second was left unfinished and the work of preparing it for publication has been undertaken as a labour of love by some of his more intimate friends. Chapter VI. was revised by Professor A. C. Bradley, the rest by Vaughan's old colleague in Cardiff, Professor J. S. Mackenzie. The fine Memoir at the beginning of Vol. I. was written by the general editor Mr. A. G. Little, F.B.A. To Vol. II.

¹ For a critical review of it by Bosanquet see *MIND*, N.S., XXV., p. 399 foll.

Mr. H. B. Charlton, M.A., contributes an affectionate appreciation of Vaughan's striking personality and of the impression he made on his students and contemporaries as a teacher whose "province was the mind of Europe during the last two centuries," together with a complete list of his books, articles and more fugitive pieces. On behalf of his contemporaries in the seventies at Balliol, of whom I had the honour to be one, I may perhaps be allowed here to express the gratitude they feel to these younger friends for the admirable way in which they have executed so difficult a task. If I mention one or two things which nevertheless I cannot help wishing could have been added or omitted it is only in deference to the task which the Editor of *MIND* has imposed on me as reviewer and critic.

I have mentioned the Essay on Rousseau. I cannot help thinking that the Editor would have done better to follow his first impulse and to have reprinted it here. It is necessary as a connecting link between Volume I. and II.; but the *Rousseau* is an expensive book and is the less likely to be in the hands of many of the readers of this one. This omission seems to me all the more unfortunate that the one passage that is quoted from it is the somewhat unfair estimate of Fichte here appended to the essay on that philosopher. This was severely handled by Bosanquet in the review mentioned above and had been to a large degree corrected in these volumes. It did not, therefore, deserve to receive the prominence here given to it.

Not having seen the various versions of the Chapter on Burke the reviewer is at a disadvantage in judging of the course that the Editor has taken with regard to it; but it is to be wished that instead of adopting the incomplete version of 1910 he had printed the early and complete one of 1890 (?). Possible unripeness in the latter would probably have been compensated by greater lucidity. As it is, the reader who has not noticed (as happened in my own case) the warning on page vi of the Preface is apt to find himself in a sea of confusion as to the course of the argument. Burke is a difficult enough subject, as anyone who has tried to give a lucid account of his complicated and often inconsistent mind on fundamental questions of politics well knows, and it is no wonder that Vaughan returned again and again to the task. But the difficulty is increased by the piecing together that has been resorted to, and one loses in clearness what one may have gained in the greater maturity of the writer's thought.

Coming to the plan of the book itself, the keynote is struck in the first sentence "Political theory goes hand in hand with history". The problem is *one* throughout, but "as the conditions of the problem vary from age to age so the solution of it must of necessity vary with them". In the period dealt with "The break up of the old order in Church and State demanded a new statement of the first principles of political obligation: hence the whole line of thinkers from Hobbes to Rousseau and Burke. The industrial revolution, the

sudden appearance of nationality as a dominant factor in the life of Europe, once more changed the whole face of politics: hence the Socialists on the one hand, the German philosophers and Mazzini upon the other". The first of these periods is characterised as dominated by the idea of the Social contract (in Hobbes, Spinoza, Locke) and by its method as the analysis of ideas. In the next period we have "The Eclipse of Contract" in Vico and Montesquieu. The origin of society is now sought "not in self-conscious interest in any form but in the blind working of a whole network of moral and religious beliefs"; the method is no longer analysis of ideas but analysis of facts. Next we have "The Attack on Contract" in the utilitarianism of Hume and the mysticism of Burke—to be followed by an entirely new departure in which in place of the separation of the individual from society, morals from politics, thought starts from the community and from the recognition that it is impossible to divorce politics from morals. "The first blow," we are told, "in this as in all other fields of modern philosophy was struck by Kant". (It is here that the lacuna of the Rousseau begins to tell.) With Fichte came the new idea of nationality (yet it is odd how few allusions there are to the *Reden*, that trumpet call to the German nation—only a single overt one so far as I have been able to discover) and with Hegel, at any rate in new form, the idea of evolution. The story ends with Mazzini. "The might that enabled (Mazzini) to give its due weight to each of the elements (the individual, the Family, the Nation-State, Humanity), which in an ascending scale combine to form the political existence of man, is the enduring service which he rendered to political theory. And beyond that, so far as the wider issues of the matter are concerned no subsequent thinker has yet gone. It is with the name of Mazzini therefore that the historian of political theory may provisionally close" (II. 6*).

Both the scope and the limits of the work will be seen from this skeleton sketch. It is a great torso. Of the learning, of the incisiveness, the fine balance and general soundness of the criticism, the vigour and literary merit of the style and the sense of finality which many of the summaries bring with them, it is impossible in a review like this to give any idea; and I shall not attempt it. There is nothing like it in British Political Philosophy. The nearest approach is in the *Lectures* of his kinsman and teacher, T. H. Green, on the *Principles of Political Obligation*. But the subject is immensely extended and the individual writers are handled with a fulness and with a wealth of historical illustration to which the *Lectures* make no pretence. On the other hand Vaughan has not attempted the constructive study of particular points that forms so valuable a part of the *Lectures*. It is not that this is by any means entirely absent, but the reader has to gather the author's views from passages scattered up and down in the course of his critical treatment of particular philosophers. Of particular value in this respect are his treatment of the application of scientific

method to politics (II., 201) of the relation of the individual conscience to the community (II., 285) of the relation between the speculative and the practical reason as principles of progress (II., 232) and (with special relation to the problems of our own time) the discussions on Nationality (241, 320 and *passim* in Vol. II.).

If it is an ungrateful task under the circumstances to criticise the editors it is a still more ungrateful one to criticise the author and indeed there is little room. But I shall mention two points, partly at least explicable by the unfinished condition in which the book was left—the first a matter of arrangement, the second of fundamental theory. Vaughan's method of microscopic analysis is a main feature of his work. It gives scope to a fulness and breadth of treatment that nothing else could. But it has the disadvantage of involving considerable repetition which will I think be apt to weary the more expert student. This is already in some degree manifest in the first volume, but is much more so in the second. To take a single instance. The long passage quoted from Hegel's *Philosophy of History* (II., pp. 288-291) belongs of right to that philosopher's theory of progress and when it occurs in the chapter on Mazzini not only repeats what had previously been said but reminds the reader that something *more* ought there to have been said to do justice to Hegel's theory.

The theoretical point is of more importance. The main positive teaching of the book as a whole is that without the idea of Duty no society could hold together for a week and that any political theory which ignores it or explains it away is a rope of sand. This is the main count against the earlier philosophies here discussed. It is a sound and altogether vital point. It was all the more necessary that the writer should state his own view of the basis of this central conception in clear and unambiguous terms. Yet I have failed to find any explicit account of it that could be taken as the Author's own. At one time he seems to identify it with a sense of brotherhood (I., 111) at another he speaks of duty as an ultimate fact (I., 343), at another still he speaks of it as a blank form, which has to wait on expediency for its filling (I., 122).

These statements may perhaps be all true and reconcilable with one another but reconciliation is clearly necessary, and it is to be hoped that among his papers there may still be one in which it is attempted, and which may be added in a subsequent edition. However valid these criticisms may be I wish to repeat that the defects to which they call attention are mere specks in a book which I believe will take its place as the most important contribution to political philosophy of our time.

J. H. MUIRHEAD.

[In view of future editions I have noted the following misprints: I., 270 n. for "Come upon" r. "Compare"; II., 169, l. 8, for "God" r. "Good"; II., 236, l. 11, for "for" r. "about"; II., 238, l. 3 fr. ft., for first "is" r. "it".]

Proceedings of the Aristotelian Society. New Series, Vol. xxiv., 1923-1924. London: Williams & Norgate, 1924.

Concepts of Continuity. Aristotelian Society, Supplementary Volume IV. London: Williams & Norgate, 1924.

THE Supplementary Volume contains the papers and discussions contributed at the Joint Meeting of the Aristotelian Society and the Mind Association in July, 1924. The Inaugural Address by Prof. W. G. de Burgh on 'Metaphysical and Religious Knowledge' has the commendable aim of urging philosophers "to unite with theologians in an examination of their respective claims to knowledge," but it is difficult to gain from the Address any clear view of the way in which he conceives metaphysical and religious knowledge to be related to each other. He maintains that religion is essentially theoretical and not merely practical, yet says that the distinction between metaphysical and religious knowledge is "analogous, in a certain respect" to the Kantian distinction between scientific knowledge and moral faith, and again that "the reason and faith of religion differ specifically from the reason and faith of metaphysics". "The real distinction is of quality, between the rational faith of metaphysics and that of religion; in that the one is dependent on processes of logical thinking, both for its antecedents and for its issues; while the other is never primarily intellectual in origin, but rather the response of man's whole nature to God's compresence" (p. 12). Yet on an earlier page (6) we are told that cognition is both the presupposition and the outcome of religion.

The discussions collected in this Volume seem hardly so successful as those of some previous years. Perhaps the subjects are less happily chosen, and the contributors may not always have been keen about the subjects assigned to them. The first Symposium is concerned with the bearing of the Quantum Theory on our concepts of continuity. The non-expert reader is at a disadvantage in such a discussion, since the expert contributors either assume a knowledge of the theory in question or content themselves with somewhat general indications of the nature of the problem involved. So far as I have understood the papers, the positions of the several contributors may be roughly stated as follows: Prof. J. W. Nicholson is inclined to expect that the physical discontinuity assumed in the Quantum Theory will turn out to be capable of interpretation in terms which do not involve mathematical discontinuity. Miss Dorothy Wrinch holds that, if physical science requires us to accept discontinuities, we have no right to raise objections on the ground of what she calls "our intuitive feelings about continuity". Prof. Lindemann suggests that the difficulties about discontinuity depend upon our choice of fundamental physical concepts and that if others more appropriate to the case were chosen the difficulties would no longer be felt. Prof. Wildon Carr is more concerned to extract some philosophical result from the discussion, and concludes that "the continuity of physical reality is of an entirely different

order to mathematical continuity and analogous to psychological". With this Symposium we may naturally connect the paper of Prof. J. Chevalier on 'Le continu et le discontinu,' in which he represents science as swinging pendulum-wise from an insistence on continuity to an insistence on discreteness, these two being in fact complementary and inseparable aspects of the one physical reality.

The Symposium on 'The Term Law in Psychology' is rather unsatisfactory, a result with which the vagueness of the subject proposed for discussion may well have had something to do. Mr. A. W. Wolters argues at length that law and what he calls 'determinism' must be assumed in psychology, but these terms are used by him in such a wide sense that they need not mean more than determinate connexion in general. One would have thought that this much might have been taken for granted, as the two other papers do take it. Dr. Levine remarks very truly that law "is virtually the same conception as science itself". Nevertheless he goes on to question whether the conception of law can be applied to mind. His own sympathies seem to be with a Bergsonian type of view. "May it be argued," he asks, "that this category of law originates in the realm of physical being, that the intellect is an instrument which has been evolved to deal with physical or spatial realities, but that it is illegitimate . . . to apply the same category . . . to . . . the psychical?" To none of the writers does it seem to be a question whether a science of psychology can be other than a natural science, though they differ in their views about the relation between such a natural science and mechanical determination. Dr. McIntyre holds that psychology must be 'objective,' but he disclaims behaviourism, and what he seems mainly concerned to maintain is that we must treat the 'psycho-organism' as a single fact or unity. "Nothing happens in or to consciousness: it is the organism which is conscious, now of this, now of that, in and to which events happen."

The third Symposium is devoted to 'Critical Realism'. Prof. Loewenberg's paper is mainly expository—according to Mr. Broad he explains "very fully and fairly" the general position of the Critical Realists—but he also indicates briefly at the end of the paper some of the formidable difficulties involved in their strange dualism of non-existent essences and problematical existences. Mr. Broad's criticism is largely occupied in showing the ambiguities and difficulties of the view that essences, and essences alone, are "given". The two sets of criticisms taken together suggest forcibly that the Critical Realists have not thought out their position very carefully. Mr. Shebbeare is amiably willing to see merits in their doctrine, but so far as one can make out from his rather desultory paper these merits do not in the end amount to very much even for him.

In the fourth Symposium on 'The Relation between the Physical Nexus and the Psychical Nexus of Successive Generations' we are once more in the hands of the scientific experts. Prof. J. Johnstone

seems to regard the general question as settled by his rejection of the dualism of bodily and mental characteristics, and in this connexion he makes some strange statements about the immediate dependence of certain mental characteristics on the glandular secretions—statements which another contributor does not hesitate to characterise as arrant nonsense. He then goes on to discuss the relation of the racially continuous 'germ' (which he distinguishes from 'germ-plasm' in a way not easy to follow) to the discontinuous individual organisms through which it is transmitted. Prof. Dendy is chiefly concerned to define the meaning of physiological inheritance, and draws a useful distinction between actual transmission and inheritance in a broader sense. He has occasion to notice the fact that recent experimental work appears to have thrown some doubt on the validity of the doctrine of the non-inheritance of acquired characters, and Prof. MacBride, not content with this guarded admission, makes emphatic repudiation of Weismann's doctrine generally, saying, *e.g.*, that "the distinction between 'soma' and 'germ-cell' is an utterly exploded one—and it may justly be characterised as a remnant of Weismannian superstition". Prof. Lloyd Morgan is the only contributor who really deals with the psychological side of the question, and he formulates the issue in a more definite way by asking whether the nervous connexion on which a conditioned response depends can be inherited. His own answer is that, while the time taken to acquire the conditioned response may apparently be much reduced in successive generations (Pavlov), he knows of no case in which the necessity for individual acquisition has been eliminated.

The final Symposium asks, 'Is the belief in a transcendent God philosophically tenable?' According to Mr. Hanson modern thought has shown "an increasingly powerful tendency" to substitute an immanent for a transcendent view. He adopts for his own part a Bergsonian view, and tells us indeed that "to assert, in most well-informed circles and even to the intelligent outsider, the existence of an immanent life-force is in these days to call attention to the obvious". But a transcendent character, he argues, can still be attributed to this immanent life-force in virtue of the inexhaustible energy with which it "pushes on to an ever fuller expression". He apparently has no difficulty about taking a life-force for a deity. Miss Oakeley's paper is not always easy to follow, and her conclusion that by thought we can know that there is a reality that transcends the scope of logical thinking seems not to be an answer to the definite question proposed for discussion. Prof. Mair's view may be indicated by the statements that "the *ens realissimum* appears and manifests itself . . . at every point of reality" and is so far immanent, while it is also transcendent in so far as the manifestation is not "equally full in each case" nor complete "in the fullest revelation of the real yet made to man". Prof. Webb's paper is the only one that addresses itself quite directly to the question, and his answer is that everything depends on whether

the philosophy that is to pronounce on the belief does, or does not, take religious experience into account.

In the volume of *Proceedings* for 1923-24 Dr. Percy Nunn's Presidential Address on 'Scientific Objects and Common-Sense Things' is meant to supplement certain earlier papers which he read to the Society and to bring out the relation of the realistic doctrine there stated to recent discussions. The Address is chiefly occupied with two difficulties which a realistic doctrine has to face. The first is that if, *e.g.*, the blurred *sensa* of myopic vision involve for their explanation a reference to the myopic eye-lens, it is "difficult to avoid the further admission" that the normal *sensa* must involve a similar reference to the normal eye-lens. This seems so plainly true that one rather wonders that Dr. Nunn should seek to evade the admission. Apparently he does so because he is afraid that we are then "eternally cut off from knowledge of the thing as it exists . . . in contexts from which perception is excluded". But this fear again seems at first sight to contrast rather oddly with his attitude towards 'scientific objects'. For his difficulty with these constructions of science is precisely that they go so far in eliminating perceptual qualities (the secondary ones at any rate) and setting up, as it would seem, another reality behind the things of sense. The two positions may not be inconsistent, but the resulting combination is apparently not too satisfying even to Dr. Nunn himself. He admits that he "would wish to accept the results of science, as far as possible, at their face value".

To begin with the more specially philosophical papers, there is a careful and interesting one by Mr. K. J. Spalding on the "Pre-suppositions of Philosophy," philosophy being conceived in Platonic fashion as the endeavour to rise from mere experience and opinion to the necessity and certainty of the knowledge of that which truly is. A paper by Mr. R. G. Collingwood on "Sensation and Thought" is directed against all attempts to separate, or even ideally distinguish, these two, inasmuch as all knowledge is both sensation and thought at once. This main thesis of the paper is forcibly argued, but the remaining sections which deal with 'appearances' (such as the bent stick) and with mediation and immediacy in knowledge seem more open to criticism. With these papers may be grouped one in which Prof. Wildon Carr discusses the nature of intercourse between monads with special reference to "Human Intercourse by means of Speech," and one by Dr. F. Aveling on "The Thomistic Outlook in Philosophy," in which he maintains that the scholastic philosophy is not to be regarded as merely ancillary to theology but as having a method of its own, and illustrates his contention by reference to St. Thomas's treatment of the problems of the universal and the knowledge of self.

On the ethical side there is a paper entitled 'Creative Morality' by Dr. L. A. Reid, which sketches a theory that is to be more fully expounded elsewhere, and one by the Master of Balliol on

'Sovereignty'. Mr. Lindsay in this very clearly argued paper seeks to advocate a theory of the sovereignty of law or the constitution as contrasted with the Austinian doctrine, on the one hand, and a doctrine of the General Will such as Bosanquet's, on the other. The latter does not answer the juristic question, and it is this question that Mr. Lindsay aims at answering in a manner adequate to modern political conditions. He seems to have been much influenced by the special case of the U.S.A. and perhaps does not realise sufficiently the difficulty of applying ideas derived from that case to the very different case of parliamentary sovereignty.

Two papers deal with religious topics, one on "Prayer" by Prof. A. A. Cock, and one on "The Problems of Religion for the Modern Italian Idealists" in which Dr. Camillo Pellizzi contrasts in an interesting way the treatment given to religion in the systems of Croce and Gentile respectively. Two papers connect philosophy with science, Prof. J. W. Scott dealing with the relation to philosophy of recent views about infinity and relativity, and Miss Dorothy Wrinch pursuing the subject of logical form in scientific theory. A paper by Prof. Campagnac entitled "Make-Believe" is not easy to summarise but may be said to deal with the contrast or opposition between the matter-of-fact world of practical life and science and the ideal world of values and religion. Lastly there is a paper in denunciation of "The Academic Mind" by Mr. Joad, which can certainly not itself be accused of any excess of academic quality.

H. BARKER.

The Mentality of Apes. By WOLFGANG KÖHLER, Professor of Philosophy in the University of Berlin. Translated from the Second Revised Edition by ELLA WINTER, B.Sc. London: Kegan Paul, Trench, Trubner & Co. Ltd.; New York: Harcourt, Brace & Co. Inc., 1925. Pp. 342. Price 16s. net.

MISS WINTER's translation will make Köhler's well-known work accessible to a large circle of English readers, and therefore accomplishes a useful object.

Prof. Köhler had unusual opportunities for observational and experimental work on chimpanzees. In 1913 he went out to the Anthropoid Station maintained in semi-tropical conditions at Teneriffe from 1912-1920 by the Prussian Academy of Sciences, where he remained for four years. Altogether he had under his observation nine chimpanzees, eight of whom ranged from 4 to 7 years of age at the time of the majority of the experiments, together with one adult female. As Köhler himself points out, the results might have been different in many respects had he worked with mature animals, or even if one adult male had been included among them.

The experiments, though very much more extensive than most

previous studies, are, in the main, of the classic pattern. To quote from page 4 of the translation: "All the experiments . . . are of one and the same kind: the experimenter sets up a situation in which the direct path to the objective is blocked, but a roundabout way left open. The animal is introduced into this situation, which can, potentially, be wholly surveyed, and so we shall be able to see up to which level of behaviour its capabilities take it, and, particularly, whether it can solve the problem in the possible 'roundabout' way."

Such tests comprise *détour* experiments in the literal sense where the longest path proves to be the shortest way to reach the desired goal; experiments where the object can be attained only through the means of some third body or 'implement'. (The latter term, by the way, together with 'imitation,' is objected to by Köhler as a mere *cliché* which often serves rather to conceal than to elucidate important features of behaviour, see footnote to page 25.) The auxiliary employed may be straws, a rope or a stick used in a variety of different ways, a blanket, a box, even one of four similar doors which when pulled open serves as a point of vantage to the ape once it has climbed to the top, from which it may reach the otherwise unattainable food. Curiously enough an obstacle in the form of a heavy transport box placed so as to prevent the apes from seizing the food until this hindrance had been removed presented more difficulty than did the utilisation of external aids to secure the booty. "The chimpanzee has special difficulty in solving such problems; he often draws into a situation the strangest and most distant tools, and adopts the most peculiar methods, rather than remove a simple obstacle which could be displaced with perfect ease" (p. 67).

Prof. Köhler gives many examples of how the handling of objects appears to be natural to the chimpanzee, a view already very generally held. Frequently sticks and straws are seized and manipulated in a playful manner, but the playful activity is readily directed to a useful end, as in the case of a jumping- or of a throwing-stick. Fashions are prevalent in regard to the choice and use of such objects. Considerable ingenuity may be shown by the apes in devising instruments to meet their needs. Thus on one occasion a shoe-scraper was used as a box to reach fruit hanging high overhead; on another occasion an iron bar was wrenched from the same scraper by the chimpanzee, and employed to draw the distant object within reach. Sultan, whose 'intelligence' appeared to be considerably greater than that of the other animals, also placed one cane inside a second of larger diameter, so forming a double-stick of larger dimensions than either single one when occasion demanded.

One point arising in all these tests upon which Prof. Köhler lays great stress is the importance of vision, and he states that to understand "the capacities and mistakes of chimpanzees in visually given situations is quite impossible without a theory of visual functions, especially of shapes in space" (p. 136). This statement admittedly

contains an important truth, but on the whole Köhler seems prone to emphasise it out of its due degree; and here the *Gestalt* psychologist overshadows the careful observer of animals. In this connexion Chapter VIII. on the Handling of Forms constitutes an interesting contribution to the subject. But in the frequent statements regarding the liability of these apes to "visual confusion," and attributing their apparent inability to solve certain problems to a failure of "optical apprehension" of the situation a certain bias on the part of the experimenter often seems to be evidenced. Thus Köhler himself points out that in many cases the chimpanzees show a remarkable practical perception of space and judgment of size; that Sultan, for example, in making a double-stick never attempted the performance unless the inserted case was clearly less in diameter than the case used as holder (pp. 129-130); and again on page 123 he makes the significant admission that "*the low degree of optical apprehension . . . is not necessarily characteristic of chimpanzees, for a certain improvement is possible with them, just as with human children, though in quite a different measure.*"

Considering the visual disabilities of chimpanzees it is remarkable to find that in one respect they appear to possess a relatively highly developed power of visual recognition and discrimination. Köhler in the appendix records some astonishing results obtained with photographs which show that certain apes could distinguish between black and white flat reproductions of a basket full of bananas and the same basket empty, and of a bunch of bananas and a stone similarly shaped and illuminated, and that the discrimination was spontaneous. This is one of the most amazing instances of the recognition of shape by the lower animals that has yet been recorded, and it is to be regretted that Köhler did not make more extended and controlled observations when he had such valuable material to hand. Indeed, many of his more casual observations and his remarks on social behaviour, individual differences and play of chimpanzees contain much that is of the greatest interest, and a more developed study of certain of these features would probably have yielded even more valuable results than the numerous so-called intelligence tests which he actually carried out.

One criticism must be made concerning the experimenter's frequent claim that his presence did not in any way influence his subjects in their attempts to solve the various problems. Since the classic experiments of Pfungst and of various American workers one realises only too well how difficult it is to avoid completely the effects of unwitting influence. And in view of statements such as the following Köhler's work must call forth a critical attitude towards the results: "Incidentally an observation on myself: Even before the chimpanzee has happened on the use of sticks, etc., one expects him to do so—when he is occupied energetically, but, so far, without success, in overcoming the critical distance, anxiety causes one's view of the field of action to suffer a phenomenological change. Long-shaped and movable objects are no longer beheld

with strict and static impartiality, but always in a 'vector' as if with a drive towards the critical point" (p. 36).

Again Köhler, despite his evident desire to avoid it, falls into the trap which catches most of the observers of animal behaviour and over and over again unblushingly adopts an anthropomorphic position. This, indeed, is marked in some of his most interesting records.

The book as a whole is not well arranged and suffers from needless repetition owing to the plan upon which it is constructed. The important points do not stand out at all clearly, and generally there is a certain lack of proportion. Revision and condensation could greatly improve a subsequent edition.

Apart from these faults, most of which are seldom completely escaped by any worker in this field, the book is full of interest and adds considerably to our knowledge of chimpanzees, without radically modifying it. The chimpanzee emerges as a fascinating person, and so far as this work is concerned his likenesses to the human child are more evident than his differences. At the same time it must be admitted that the book is disappointing in that it forms an addition to our knowledge of the repertory of chimpanzees rather than a real advance in our understanding of their psychology.

It is to be regretted that there is no index and that certain minor errors have escaped the proof-reader.

E. M. B.

VII.—NEW BOOKS.

The Concept of Evolution. The Herbert Spencer Lecture, 1924. By
H. W. B. JOSEPH. Oxford: Clarendon Press. Pp. 32.

WHENEVER a science is rapidly progressive it exposes itself to criticism. For it then expands and modifies the conceptions it uses to such an extent that it falls into open (though verbal) contradiction. Whoever therefore takes the meaning of terms as fixed in principle, and persists in clinging to the old meanings formerly attached to a term, can denounce their extension as a corruption of its proper meaning. Thus in the early days of Darwinism the favourite objection urged by Roman Catholic critics was that Darwin's theory was self-contradictory, because it was contrary to the very idea of a species that it should change into another. Such criticism is, however, essentially verbal. With every advance of knowledge the question arises whether it is more convenient to expand the old meanings of terms or to adopt new technical terms. The answers vary with the circumstances. 'Phlogiston' has been scrapped, but the 'atom' survives, though modern physics wax eloquent about the internal economy it is verbally incapable of having.

What is far more of a problem for science is that in the case supposed scientific conceptions may really grow into monstrosities. If they are developed carelessly or with too narrow a concentration upon the immediate problem or under the guidance of specious analogies which afterwards turn false, they may really *deserve* criticism, and be the better for it. Hence there is here a great opening for the logician, and in general the philosopher, to make himself scientifically useful. Unfortunately, however, he is not often willing to seize this opportunity. For to criticise effectively presupposes understanding of scientific method and sympathy with the actual difficulties of the science; and most philosophers prefer to rely on general commonplaces of criticism which can be applied, feebly though more or less ineptly, to any scientific question.

On this occasion Mr. Joseph had an excellent opportunity for fruitful criticism. For the notion of evolution greatly needs it. It has admittedly grown up with very little regulation, and has plainly outgrown its historical origins. Having started as a term for 'preformation' and as the opposite of 'epigenesis,' and having then become the chief support for the belief that the course of history generates real novelties, it has notoriously changed its meaning. Moreover, as commonly understood, its attitude towards a number of logical problems seems full of obscurity and ambiguity. What is really the logical status of the 'accidental variations,' which seem to be the source of novelty? If they are, are they ultimately compatible with a mechanistic reading of evolutionary history? Does Darwinism really deal the deathblow to teleology, or has it merely discovered the mechanism whereby organic nature is cleverly enabled to adapt itself to a changing environment? Does it, or does it not, demand that intelligence must have survival-value, and therefore efficacy? Does it, or does it not, reduce truth to survival-value? How

is it, and 'evolution' generally, related to 'progress,' 'degeneration' and 'stability'? These, if not also a number of more special questions connected with the acquisition, transmission and inheritance of characters, are the sort of questions which the theory of 'evolution' fairly exposes to philosophic attack.

Now clearly a single lecture must not be expected to cover so vast a field, but if any one expected Mr. Joseph to tackle these problems, he will be disappointed by this Spencer Lecture. Mr. Joseph does indeed just allude to the preformationist antecedents of evolutionism (p. 12), and mentions (p. 11) that to some 'evolution' has seemed to be 'creative' and 'emergent.' But without inquiring whether these interpretations may not be scientifically, as well as philosophically, right, he proceeds to assume that 'evolution' must mean a purely mechanical process, and to vindicate an exceptional position for mind as "the one thing which quite manifestly and indisputably develops" (p. 12)—omitting to add that no less indisputably it decays! As a result of this policy he relapses into the old negative attitude towards scientific knowledge which has always proved so barren. He continually criticises his biological colleague, Mr. J. S. Huxley, he denies that "the requirements of the doctrine of the conservation of energy can be fully satisfied in the human body" (p. 27), he declares that "we shall not fully understand organic life without first attending to the life of mind" (p. 32), and that "the unity in a living body is immaterial" (p. 24). But all these assertions are at bottom negative, and it has often been pointed out that to rest the case for philosophy (or theology) on negations, *viz.* on the present inadequacy of scientific explanations, is a bad policy logically; for it leaves philosophy at the mercy of scientific discoveries.

When it comes to positive suggestions on the scientific problem of how existing species have developed, Mr. Joseph has nothing to offer but a reference to the 'universal,' the circularity in all circles, the colouredness in all colours (p. 24). But this surely is no solution. How a 'universal' can pervade 'particulars' without damage to its unity is a *crux* which has baffled philosophers ever since Plato: and the difficulty is not lessened by a growing perception that the various cases of what is called 'the same' universal are, in each case, individual and unique. It would seem more reasonable to suggest that conceivably the process which has engendered the existing similarities between the individuals of a kind and between the different kinds, might throw some light on the genesis not only of 'species' but of 'universals' generally.

On the problem of change and novelty it is not easy to make out where Mr. Joseph stands. On page 10 he calls its relation to changeless being the problem of philosophy. On page 26 he declares "that which comes to be was there from the beginning; but whereas it was then not developed, now it is". On page 22 he seems to treat preformation as a *reductio ad absurdum*. So, on page 11, he thinks the philosophers are right who contend for genuine novelty. On page 14 he seems to 'hedge': "the growth of a mind . . . is a real coming to be of that which, *in the sense in which it exists when it has come to be*, did not exist before" (italics mine). Possibly his embarrassment is due to his seeing that a philosophy which denies genuine novelty, however much it may boast of its rationality, is at bottom *one with mechanism*, whereas one which affirms it can never be wholly rationalistic (*cf.* p. 12 *init.*). On the whole then it seems doubtful whether scientists will feel that they have derived much help or benefit from this effort of philosophic criticism. It remains to be noted that a very treacherous misprint has crept into page 9, where for "the gulf between the protozoon and the organic" 'inorganic' should be read.

F. C. S. SCHILLER.

Kant on the Moral Life: an Exposition of Kant's "Grundlegung". By J. W. SCOTT. London: A. & C. Black, 1924. Pp. 182.

The sub-title defines the precise scope of Prof. Scott's book. Of Kant's ethical writings he is concerned only with one, the *Fundamental Principles* (or *Groundwork*, as Semple's translation conveniently has it) of the *Metaphysic of Morals*. The four central chapters of the book are devoted to the detailed exposition of the Preface and the three Sections of the treatise respectively. They are preceded by an Introduction, which deals with the *Critique of Pure Reason*, and followed by a concluding chapter in which Prof. Scott gives his general criticism or "Review of Kant's Position". It may be difficult to determine what kind of preliminary chapter would be best adapted to introduce students to Kant's short ethical treatise, but I have no hesitation in saying that the method adopted by Prof. Scott in his Introduction is not a good one. In the course of 27 pages he attempts to give an outline of the whole *Critique of Pure Reason*, enumerating all, or nearly all, its main divisions and subdivisions and using its technical terminology. *E.g.*, he gives the names of the forms of judgment and the categories, quotes the schemata and principles. Obviously such an outline is bound to be bald and inadequate, is unnecessary if the student knows the *Critique* and useless if he does not. Prof. Scott would have been far better advised if he had given the drift of "Kant's findings in the field of knowledge" in a free statement as little technical as possible.

Passing to the chapters that deal with the *Groundwork* itself, I had better quote Prof. Scott's own account of the method which has been followed. "It is not easy," he says (p. 28), "to paraphrase Kant's writings, especially his later ones. And to translate them is still harder. In the following pages we are attempting neither of these things. We have a much easier task before us. We are simply to go through this work of his systematically, taking each successive section of convenient size, and, either by expanding its argument or condensing it or illustrating it, by all means to yield an impression which, while not untrue to him or to what he wanted to argue, will be of assistance in grasping what essentially Kant meant to hold in the field of Ethics." Prof. Scott has no doubt often expounded this treatise of Kant's to students and would naturally adopt the method which he had found to answer best in practice. And of course it is the actual use of his book by and to students that must determine the value of his method. I will merely say that it does not commend itself to me personally: it seems too arbitrary and variable. Sometimes the statement of the argument is so close to the text that it might as well be translation, at other times paragraphs are passed over rapidly; and the running commentary varies in similar fashion. Prof. Scott may claim with truth that such freedom has its advantages, but it has also dangers which are less likely to arise either in a free statement of the main lines of the argument or again in a regular commentary on the text. To say more, however, would involve one in questions of proportion and detail for which there is hardly space.

"Of the three Sections," we are told in the concluding Review, "the one which most clearly invites criticism of a fundamental kind is naturally the third, where the author's attention is at length full upon the ultimate issues and he is knitting up the web of his speculation" (p. 145). This statement is significant of Prof. Scott's attitude to, and treatment of, the *Groundwork*. He is disposed to make much more of the metaphysical element (the doctrine of freedom) than of the more purely ethical elements of Kant's doctrine, and it is to the former part of the doctrine that he specially attaches his final criticisms. He begins by recognising

very rightly—what has often not been recognised sufficiently—"how deep-rooted the distinction between phenomena and noumena is" in Kant's theory, and speaks of "the centrality of the doctrine for the author himself". Nevertheless he proceeds to suggest that we may formulate Kant's distinction in another way which will preserve a continuity between the phenomenal and the real. In other words, we are to keep the idea of a deeper reality while getting rid of Kant's dualism. As to the nature of this new formulation we need not closely inquire—Prof. Scott leaves it somewhat vague—but may say briefly that it is some view of reality as spiritual activity, so that "it is the being active in the sense of moving with the universe . . . that constitutes moral activity" (p. 171). Nor need we dispute the right of the critic to reject Kant's dualism. What does need to be recognised, however, is that in rejecting the dualism we are rejecting Kant. Prof. Scott professes to see, as other critics have done, evidence that Kant himself assumes from time to time a continuity that undermines his dualism. Their evidence is derived, it seems to me, wholly from reading Kant in the light of their own preconceptions. I will take one passage from Prof. Scott. "[Kant] is constantly ascribing to the idea of duty the power to stir the blood of others as it evidently stirred his own. But what is this? He is surely presupposing here that our whole passionate make-up can on occasion reverberate to the call of duty, and recognise it as what it wants. That indeed is why the cardinal transition he makes from the idea of law to that of end in the second Section of his *Grundlegung* argument is significant. End in that argument does not intentionally leave law just as it was. It takes it in a new way, else there was no point in the transition" (p. 158). Prof. Scott's language about "our whole passionate make-up" is not exactly that which Kant would use, but Kant does of course say that our mere consciousness of the moral law can generate the feeling of respect. But surely Kant's insistence, that this feeling, because so generated, is radically different from our ordinary feelings, is precisely a denial of continuity. As for the transition from law to end, it is on Kant's own view a purely formal transition: the rational nature which is an end is simply that which recognises the moral law.

On page 76 by an oversight the words 'assertoric' and 'problematic' occur in the wrong order. On page 63 there is a misprint of *Pratique* for *Critique*.

H. BARKER.

Le Génie de Pascal. By LÉON BRUNSCHVIG. Paris: Hachette. Pp. xiii, 198. 8 francs.

Pascal appears to us as an amazing genius who might have been one of the great directing forces of the human spirit, in science, in literature, or in philosophy, had he developed his powers continuously along any one of these lines. His life was short—he was thirty-nine when he died—but this was not the catastrophe, it was rather the spiritual tumult of his nature which turned him aside from one human interest after another, causing him at last to seek peace in renunciation and religious solitude. In his writings we seem to have not one but three Pascals, so divergent appear the interests which at different periods of his life held sway over him. There is the Pascal of the Puy de Dôme experiment who saw clearly in the demonstration of the fact of atmospheric weight the principle of the equilibrium of fluids. Might he not, had he continued to devote himself to mathematics and physics, have surpassed Galileo and Newton? Then there is the Pascal of the *Lettres à un Provincial*, the defender of

Port Royal, wielding a power of literary expression which would have carried him to the highest place in any branch of literary art he might have chosen. Lastly there is the Pascal of the *Pensées*, surprising us with marvellous flashes of philosophic insight.

M. Léon Brunschvicg, one of the editors of the works of Pascal in the series of "Les Grands Ecrivains de la France," and especially responsible for the critical new arrangement of the *Pensées*, is not only the highest authority but also the best qualified interpreter of the mind of that most wonderful genius. In this volume he has brought together various articles contributed by him to the tercentenary celebrations of 1923. Together they give us a complete picture, and also they throw new light on important incidents in Pascal's life and enable us to understand the extraordinary versatility of his mind, but above all they bring out in a striking way the real unity of thought and life beneath the outward diversity. No one of Pascal's contemporaries suspected the identity of the Louis de Montalte who described the disputes at the Sorbonne to an imaginary correspondent, and even to-day we find it difficult to reconcile Pascal's Christian humility and child-like submission to authority with the spirited defence of Port Royal. Some critics have gone so far as to charge him with a lapse from rectitude at the instance of false counsellors. Still more difficult is it to understand the unreserved self-dedication to the God of Abraham, of Isaac and of Jacob, of one to whom initiation into the Christian faith involved the risk of a wager. M. Brunschvicg's main purpose is to show that these apparent inconsistencies disappear when once Pascal's scheme of the principles of nature and grace is understood.

Of his two collaborators in the editing of Pascal's works one, Pierre Boutroux, son of Emile Boutroux, died prematurely in 1922. He had edited the mathematical and physical treatises. The other, Félix Gazier, who had edited the documents relating to Port Royal, was killed in the war in 1916. Two of the chapters in this volume are based on their researches and express their general conclusions. These are the chapters headed "Pascal Savant" and "Pascal et Port Royal". The three remaining chapters, "Finesse et Géométrie," "L'Expérience religieuse de Pascal" and "La solitude de Pascal" are the conclusions M. Brunschvicg has drawn from his own researches in seeking to determine the true order of the "Pensées".

A minor point of considerable interest concerns the well-known story of Pascal's father surprising his twelve-year-old son demonstrating for himself the thirty-second proposition of Euclid with "barres et ronds". Two independent anecdotes have come down to us and M. Brunschvicg shows that it is quite easy to harmonise them. Gilberte Périer, Pascal's elder sister, tells us that her brother had not read Euclid but had himself invented the geometrical demonstrations. Tallemant des Réaux, on the other hand says, what seems much more likely, that he had read secretly the first six books of Euclid, the first book during one afternoon and the others in proportionately less time. But as M. Strowski has pointed out, this more probable story cannot be true for at that time Euclid was read in Latin and it was part of the father's scheme of education that his son at that age had not begun to learn Latin. M. Brunschvicg finds in this the key to the reconciliation of the two anecdotes. The young Pascal having access to the book and unable to read the Latin had thought his own way through the figures and made his own vocabulary—an instance of a genius for geometry not marvellous but certainly wonderful.

Another incident in Pascal's life is raised by M. Brunschvicg's interpretation to a place of primary importance. This is the miracle of the holy thorn which occurred to his niece Marguerite Périer. Readers of Sainte-Beuve's History of Port Royal know how difficult that writer

found it to relate the story with patience. It seemed to him a descent to pure chicanery and to sully the splendid rationality and the high moral tone of the *Provinciales*. It proved it is true the one effectual means of parrying the blow about to fall on the devoted religieuses and gave their community at least a breathing time. Is it possible to believe that it really influenced Pascal himself? If we think it did must not even his genius suffer in its reputation? M. Brunschvicg argues with strong conviction yes to the first question, no to the second. The dates are important. On the 23rd November, 1654, Pascal attained that certitude and joy which was the sign to him not of an immediate union with God but of his attachment to a suffering and forsaken Jesus. On the 24th March, 1656, in the church of Port Royal de Paris, his young niece was cured of a lachrymal ulcer by touching a thorn of the crown of Jesus Christ. To Pascal this was God's response signifying to him the acceptance of his sacrifice. It was no vulgar superstition, it accorded to the full with what he had thought out to be the purpose of miracles and the value of miracles as proofs of revelation. In their pure objectivity miracles are nothing, their whole significance and value is their interpretation by the subjectively prepared soul. This miracle happened at the darkest moment of his struggle against the political intrigues which were turning the authority of the Sorbonne and even the papacy against the true disciples. It was the personal sign to him of God's approval.

The main purpose of M. Brunschvicg is to show us that the clue to the apparent contradictions in the genius of Pascal lies in those fragments of the *Pensées* which were written with a view to an "Apologie du Christianisme". The problem of revelation is that of the relations between science and religion and the solution lies in the significance of experience in the one case as in the other. The real genius of Pascal shines out in the story of the meeting with Descartes when the scheme of the Puy de Dôme experiment was discussed. Descartes was at once impressed with the idea of the column of air and felt it extremely probable that the experiment would verify the hypothesis, but his chief concern was to reconcile the fact, if it proved to be fact, with his system, and particularly with the rôle assigned by him to the subtle matter. Pascal, on the other hand, is solely interested in making the conditions of the experiment such that they would test the fact and determine whether it was or was not actual fact. So likewise in his projected *Apologie*, religious experience was to play the chief rôle and his one care was to make certain that all the conditions of experiment which must be satisfied for scientific demonstration should be satisfied for religion. Pascal in fact saw deeper than any of his contemporaries into the nature of the proof we obtain by the experimental method.

H. WILDON CARR.

The Psychology of Religion. By W. B. SELBIE, M.A., D.D. Oxford, at the Clarendon Press, 1924. Pp. xii, 310. 12s. 6d. net.

The general lines of Dr. Selbie's book have been determined by the fact that it is the first of a series of Oxford Handbooks of Theology. In the words of the Bishop of Gloucester, the General Editor, they are designed "for the use of Theological Students and others who are anxious for wise and sober instruction on questions of religion and theology". Accordingly one expects, and receives, a review of the subject generally rather than an exposition of the author's views, and this task has been excellently accomplished. The qualifications of success in such a case as this may be

said to be a cool and well-balanced judgment, absence of partisanship and a sense of proportion. This proportion needs to be shown in the space allotted to various topics, in attention given to various authorities, and in quotation. Judged by these canons Dr. Selbie succeeds, and admirably fulfils the intention of the series which his book inaugurates. It will also be a useful text-book for class-work accompanying lectures given on the psychology of religion. If a second edition is demanded, as one hopes will be the case, there are one or two points in connexion with which a somewhat fuller treatment would be an advantage. Amongst these may be mentioned asceticism, and the relation between religion, morality and ethics.

It is not often that one feels inclined to criticise either the methods or conclusions of the author, but occasionally a doubt appears. For example, Dr. Selbie inclines to a common, but I think regrettable, looseness in using the term "instinct". Is it an "instinct" of the wrongdoer to repress evil? Again, after hesitating by calling the longing for immortality "half-instinctive" and "almost instinctive," Dr. Selbie capitulates to the wrong usage and speaks of "that deep and ineradicable instinct which tells man of a life beyond the grave". In popular speech this would convey a fairly accurate notion of the virtual universality of the belief, but it is difficult to see how any psychologically correct definition of instinct can justify it.

A similar point arises with regard to the use of the terms sub-conscious and unconscious. The general reader might very well gain the impression that they are synonymous. Dr. Selbie remarks upon the variety of meaning attached to them, but not infrequently uses them as if they were interchangeable, for example, quoting from William James, he says that James speaks thus of "the unconscious". Yet James, of course, disliked the term and considered it misleading. Dr. Selbie quotes the use of the term unconscious which W. H. R. Rivers advocated, namely such experience as cannot be recalled by ordinary processes. It would have made for greater clearness if this had been adopted, or at least some distinction drawn between the nearer and remoter aspects of the subliminal. Dr. Selbie states that we are responsible for the contents of the sub-conscious, a statement which in a general sense is unobjectionable. But I doubt whether it is possible to maintain that whatever it contains "has come through consciousness" to use the author's phrase, particularly in view of the position just mentioned which makes no definite distinction between sub-consciousness and the unconscious. Even many of the contents of the sub-conscious mind which may be alleged to have come through consciousness, have never been objects of direct attention or deliberation. They represent presentations to which only a fleeting, indeed one might almost say a sub-conscious, notice was given. Still more, unconscious experience, in the sense at least in which Rivers used the term, must represent certain ancestral and inborn factors which cannot be said to have come through consciousness. Dr. Selbie's anxiety not to be drawn into a cheap and easy way of repudiating any moral responsibility is one with which sympathy can be expressed, but it would seem that in this respect he has exceeded in the opposite direction, and made our responsibility greater than it actually is.

A few minor points of criticism arise. Is it quite correct to say that "apart from reason will is blind"? Purposiveness is surely possible at times in the human mind, as it always is in the animal mind, apart from reason, and such purpose is by no means blind. Again, are there "many" primitive peoples who share the alleged ignorance of the Arunta regarding the facts of procreation? Finally Prof. McDougall's position regarding

free-will cited here is that of an earlier book. In his recent "Outline of Psychology" he inclines to acceptance of free-will.

Dr. Selbie's book raises the question whether the psychology of religion is destined to fulfil the expectations it has aroused. Probably the same would be true were the psychology of art in question. In each case the subject sets its own limits. The psychology of religion has shown that religion is characteristically human; it has exploded some obsolete dogmas both in theology and scepticism; it has helped religious education. But pondering Dr. Selbie's survey of thirty years of investigation, the question does occur—is it thus far and no further? Has it brought us any nearer to the essence of religion, has it solved any of the age-long enigmas, has it analysed the haunting attraction that compels men to think in terms of the ultimate values? It certainly has not yet—will it ever? That is a question which it is not fair to ask of Dr. Selbie. At least we may be grateful for what he has done, and has done well.

ERIC S. WATERHOUSE.

Mind in the Parmenides. D. P. MACKAY. Pp. 114. [No publisher's name nor date.]

A thesis submitted for the degree of Ph.D. by the author, a member of the staff of the University of California. When one takes up an essay with this title, one almost expects to find it reduced to the single statement that "there is nothing about Mind in the *Parmenides*". On the face of it, nothing is said except in one brief passage (132 b. 3—c. 12) where the suggestion that the *idéai* are *νοήματα*, "thoughts," is made only, as it appears, to be curtly rejected. Mr. Mackay's thesis is that the positive teaching of the dialogue is contained in this very passage. When Parmenides says to Socrates, "but if the *idéai* are *νοήματα*, then either all things think or there are unthinking thoughts," and Socrates replies that "this too seems absurd," we are to understand that it is only the latter alternative of the "unthinking thoughts" which is rejected. It is seriously meant that all things think. But this must not be understood in a subjectivist sense. Plato and Aristotle both take a "naturalistic" view of mind. With them, to have a *ψυχή* or *νοῦς* does not mean to be conscious, but merely to have meaning or significance. Hence Plato holds that "all things think" in the sense that they have an intelligible structure. Aristotle means the same thing by his doctrine that the *νοῦς* is *δυνάμει πᾶς τὰ νοητά*.

I am afraid that this "new realist" interpretation of Plato and Aristotle founders on the rock of the Greek language. Neither Plato nor Aristotle ever said that "all things *νοεῖ*". Aristotle says that very few things (God, the subordinate "separate intelligences" and man) do so. And of the thought of man, he says, as we all know, that it "thinks nothing without a *φάντασμα*," and also that when one *νοεῖ* one *ipso facto* *νοεῖ ὅτι νοεῖ*. The equation *νοεῖν* = to have significance, so far as I can see, makes nonsense of all these positions. And as for Plato, he devotes the central pages of *Laws* X to an attempt to prove that "naturalism" is refuted by the consideration that the "motions of *ψυχή*," among which wishes, memories, fears and hopes are expressly named, are anterior to and cause all the "movements of bodies". How Mr. Mackay, who has no doubt read the *Phaedo*, can suppose that the antithesis physical-psychical is foreign to Plato is more than I can conceive. At any rate, I am sure that, to parody an old *mot*, he might possibly find ten Professors of his mind but hardly ten Greek scholars (or even one).

Whether or not it is intelligible to talk of a "meaning" which has not been put into that which has it by one conscious intelligence and intended to be apprehended by a second may be a subject for discussion, but it is really not a disputable statement at all that νόησις in Greek always means a *conscious* activity. νοῦς, it is true, sometimes = meaning and νοεῖν = to mean, but only in contexts where the reference is to the words or acts of a conscious intelligent being.

In the discussion of the riddles of the second half of the dialogue, the author, like others before him, finds Plato's real purpose in playing off two rival conceptions of "unity" against one another, one according to which to call anything "one" means that it is a self-contained "explicit entity," the other which sees in the "one thing" one element in a wider structural whole. I have myself tried a similar interpretation in my time, but I feel it now to be unsatisfactory. If one half of the "antinomies" end by denying all possible predicates of the "One," the other half end by affirming all kinds of contradictory predicates of it simultaneously. I cannot now believe that Plato means to give any preference to indiscriminate assertion over indiscriminate denial. It is more reasonable to say with Burnet that we are dealing all through with a *jeu d'esprit*, though the jest, *bien entendu*, is that of a wise man. Plato rehearses without any refutation objections made by the dialecticians against the "postulate" of Forms and then turns the tables by showing that *he* can use their own weapon of dialectic with still more damaging force against their own postulate of "unity". He treats them exactly as his Zeno professes to have treated the critics of Parmenides.

If I do not believe Mr. Mackay right in his main contention (as no competent Greek scholar can), I must do him the justice to add that his work contains many shrewd incidental observations, and that I think he goes wrong less from lack of philosophy than from lack of Greek. It is a pity that his printer and proof-corrector share this lack.

A. E. TAYLOR.

The Nature of Intelligence. By L. L. THURSTONE, M.E., Ph.D. (International Library of Psychology, Philosophy and Scientific Method.) London, 1924. Pp. xvi, 167.

Prof. Thurstone has undoubtedly an important thesis to present; and he endeavours to convey it to the reader both by frequent repetition and by variation of his terminology. Nevertheless there is difficulty in discovering what precisely this thesis is and consequently in passing judgment upon its merits.

The author commences with an exposure of what he calls "the stimulus-response fallacy" — the attempt to construct a complete system of Psychology by correlating specific forms of behaviour with appropriate stimuli. "The datum for Psychology," it is contended, is not the stimulus but the "dynamic living self". This the author goes on to explain is "made up of impulses that are for some reason arrested whilst partly formed, incomplete impulses that are in the process of becoming conduct. By this I do not mean that conscious life is different from conduct. . . . I mean that conscious life is made of the same stuff that conduct is made of. The only difference between an idea and the corresponding action is that the idea is incomplete action." When the reader has decided upon an interpretation for this (which, by the way, is not intended as mere Behaviourism) he is in a position to approach the constructive thesis. "The central subject matter of psychology is the history of these impulses

from their source in the *metabolism* of the organism to their partial expression in *thought*, to their more complete formulation in *perceived stimuli*, to their final precipitation in *overt conduct*."

The language employed here, surely, is perverse, and it becomes even more perverse when a "concept" is defined as "*an unfinished act so skeletal that our own bodily location still remains to be chosen*," and "intelligence" as "incompleteness of expected behaviour".

Nevertheless, an interesting question has been raised and with patience the main lines of Prof. Thurstone's answer can be discerned. It may perhaps, without serious misrepresentation, be paraphrased as follows. The principal problem of the psychologist is to analyse a certain psychophysical cycle of events to be designated "the psychological act". This is found, in general, to commence with a vague conative state, to issue (on the higher levels of mental life) in complex forms of purposive activity which may be said to be intelligently directed. Conceptual, ideational, and perceptual processes—in fact all modes of consciousness—arise only as preparatory stages for the 'overt behaviour,' which last, by satisfying the original impulse, results in quiescence and thereby terminates the cycle. It is for this reason and in this sense, apparently, that mind can be described as "unfinished conduct". Perhaps the least satisfactory part of this book is that which gives it its somewhat misleading title. Of course, a theory as to the nature of Intelligence naturally emerges from the general thesis—to the effect that Intelligence consists in "the capacity to make impulses focal at their early, unfinished stage of formation"—and the author has kept one eye on this topic throughout the more general discussion. It is, however, only in the last few pages that the problem comes up for special attention; and here the author hardly allows himself sufficient time to develop the implications of his theory, or to bring it into relation to the data afforded by mental tests, and to the theories of intelligence founded on this kind of experimental inquiry. It would seem that Prof. Thurstone is much more concerned with the attempt to harmonise traditional Psychology, Psycho-analytic theory and Behaviourism. To others so occupied—provided they do not require overmuch detail or precision—this book will be of interest.

C. A. M.

The Works of Aristotle Translated into English: Vol. XI., *Rhetorica, Rhet. ad Alexandrum, Poetica*. Oxford: Clarendon Press, 1924. [No pagination.]

The Delegates of the Oxford Press are to be congratulated on the progress that the Oxford *Aristotle* is making to completion. The contents of the present volume call for no detailed critical comment. The version of the *Poetics* is that already published by Bywater in his edition of the Greek text, to which the General Editor (Mr. W. D. Ross) has added a summary of Contents and an Index. The *Rhetoric* could have fallen into no more competent hands than those of Prof. W. Rhys Roberts; the inferior but still interesting, though almost certainly un-Aristotelian, *Rhetoric to Alexander* has been well rendered by Prof. E. S. Forster.

In many ways the task of the translators has been an easier one than that of their colleagues who have dealt with other parts of the Aristotelian corpus. There has been much less need to combine reconstruction of the text with the proper function of the translator. The text of the *Poetics*, indeed, is notorious for the puzzles it presents, but here the rendering reproduced is avowedly that of a great scholar dealing with the Greek as

reconstituted by himself. For the other two works, Roemer offers in the *Rhetoric* and *Hammer in the Rhetoric to Alexander* a scholarly foundation from which it is comparatively seldom necessary to depart. Where the editors have found departure necessary, they seem to me to be generally right, and it is interesting to note that, like several of their colleagues, they tend in these cases to bring us back from more recent "emendation" in the direction of Bekker. The tendency is not so obvious as in the cases (e.g., that of the *de Generatione*) when the later editor has been decidedly incompetent, but it is quite discernible. Bekker sometimes selected his MSS. badly, and his punctuation was erratic, but his judgment between variants in the MSS. he examined seems to have been remarkably sound; his work emphatically wears better than that of most of the would-be improvers upon him. In the present case there has not been the necessity, as in the *Metaphysics*, *de Generatione* and elsewhere, to subject it to perpetual reconsideration in the light of MSS. which had been neglected in preparing the text for the Berlin quarto.

There is just one remark I feel called upon to make, not as a criticism of the present volume, but in the hope that it may attract the attention of the General Editor. The plan of the Oxford translation appears to contemplate the exclusion of the very numerous and often very interesting fragments of lost Aristotelian works. I think this almost as unfortunate as the omission of *dubia* and *spuria* from Jowett's translation of Plato. The Oxford translation is likely to remain for some generations the one standard version of Aristotle in our language, and to be the court of appeal for the numerous students of science and philosophy who are profoundly interested in Aristotle without being themselves thorough Greek scholars. I submit that such a work ought to give us Aristotle as complete as he can be made, *alles was er je geschrieben*, so far as it has come down to us. If we are to have in our English Aristotle works like the *de Mundo*, which Aristotle certainly did not write, and the *Rhetoric to Alexander*, which Prof. Case, I believe, stands alone in accepting, it is irrational that we should not have also the remains of the *Eudemus*, the *Protrepticus*, the *περί φιλοσοφίας*, which Aristotle certainly did write. This is all the more important as we are beginning to realise more clearly the necessity of starting with a reconstruction of these early works, if we are ever to understand the development of Aristotle's personal thought and the character of his influence on philosophical literature down to the publication of his MSS. in the first century B.C. I trust that in some way or other it may be found possible yet to include the *Fragmenta* in the translation. If financial considerations permit, it would be better to add a supplementary volume to the projected eleven than to present an imperfect Aristotle to British and American readers.

A. E. TAYLOR.

The Philosophy of Grammar. By OTTO JESPERSEN. London: George Allen & Unwin, 1924. Pp. 359. 12s. 6d. net.

This very interesting book, as its title and authorship suggest, raises a great number of important questions, some deliberately and in so many words, some incidentally and in the mind of the reader. These last form the best tribute to the author's candid and invigorating manner. Prof. Jespersen is justly famous for his great command of the overwhelming masses of loose facts with which linguistic studies have at present to deal, and not less for the uncommon sense which he brings to bear upon them. He realises, as many grammarians do not, that grammar, if it is to become a science, must be based upon a logic and a psychology definitely addressed

to the problems of language as well as upon linguistic history, formal analysis, and the comparison of usages.

But at present there is an unbridged gulf between linguistic and philosophic studies. The apparatus and subject matter of the grammarian are so vast that no one man can combine a mastery of them with more than occasional raids upon logic and psychology. Nor, it must be confessed, do logicians and psychologists usually go out of their way to meet him. It is not surprising, therefore, that *The Philosophy of Grammar* contains more grammar than philosophy. The author does, it is true, constantly discuss points which logicians have debated—the connotation of proper names, the relations between substantives and adjectives, between subject and predicate, negation and abstract names are examples—but, while the facts adduced in these discussions are often of extreme interest, and such as the logician would not easily think of unaided, the discussion itself sometimes fails to do justice to the logician's distinctions. For example, although reference is made to Dr. Keynes' treatment of proper names as non-connotative, no mention is made of the 'subjective intension' or of the 'comprehension' which that author is careful to allow them, an allowance which, I think, meets Prof. Jespersen's claims on their behalf. And occasional statements which few logicians would pass without challenge, e.g., "the essence of any substance is the sum of all those qualities that we are able to perceive (or conceive) as in some way connected" (p. 75), also indicate how independent the disciplines of logic and grammar still are.

These inevitable defects do not, however, greatly diminish the value of the book. Both destructively and constructively it has notable merits. Among the latter its treatment of 'nexus' deserves close attention. And, as a whole, it is probably as good a discussion of the more fundamental grammatical problems, which are still waiting for solution upon the co-operation of psychologists and logicians, as can be provided. It is documented with all Prof. Jespersen's usual wealth of illustration.

One other point is worth comment. The resolution with which the author refuses to be hoodwinked by customary formule, and the candour with which he discusses his own, make it difficult to avoid the conclusion that grammar is in a state of extraordinary confusion. Rival points of view are abundant, but principles by which they may be chosen are lacking. A great uncertainty prevails as to which are the general questions to be pursued, and even as to what grammar should be attempting to do. Here is another reason for the co-operation of philosophers. As Prof. Jespersen's very representative citations show clearly, grammarians, for all their amazing skill in the analysis of forms, have, as a rule, no such aptitude for the analysis of questions, and the separation of questions is surely a chief part of the philosopher's business.

I. A. R.

Metaphysik im erkenntniskritischen Grundriss. By DR. WALTER EHRLICH.
Halle, Max Niemeyer, 1924. Pp. 135.

This book is more ambitious in conception than its brevity would lead one to think, it might be described as a coherent series of suggestions for the main outlines of an idealist system of metaphysics. It is certainly able and well thought out, and deserves the special attention of those sympathetic with that type of thought. That it should convince realists or provide a full treatment of the many problems touched upon is more than could be expected. The book is put in dialogue form, though little difference can be traced between the distinctive attitude of the two

characters. The idealist argument takes the rather ambiguous shape that we cannot think what is not object of thought (pp. 22-23). From this the author draws the conclusion that everything, including human beings as well as physical things, exists only as content of a divine or absolute mind, explicitly dissociating himself from Berkeley (p. 26) because the latter maintained that human minds were independent substances while physical things were mere appearances. It is perhaps unfortunate that this argument is not stated at greater length, since it is the basis of the author's whole system.

But it is probably the chief purpose of the book to protest against all attempts to reduce reality to a system of concepts and, in general, against the exaltation of the abstract concept at the expense of the concrete individual. This work is forcibly and effectively done. The author insists that the inter-subjective experience in which we all participate must be regarded as continuous, concrete and individual. Thus, in regard to the reality of time, he insists that, if we think of the divine mind as being conscious in a moment of what we perceive as an hour's events, this divine experience must still somehow include the hour with its temporal features just as experienced by us, for otherwise the divine experience would be poorer than ours (pp. 77 f.). Knowledge consists in a process of extension of the self (*Ich-erweiterung*) and merging the self in the object (*Ich-versenkung*). But I think that the author's epistemology rather suffers from the assumption that true knowledge is literal identity with the object known, though he admits that this does not occur in our ordinary so-called knowledge. However that is a matter of opinion.

A. C. EWING.

Quickness and Intelligence: An Enquiry concerning the Existence of a General Speed Factor. BY E. BERNSTEIN, B.A., B.Sc., Ph.D. (British Journal of Psychology Monograph Supplements, VII.) Cambridge University Press. Pp. 55. 7s. net.

This is an account of a series of investigations carried out upon school children with a view to discovering whether a common quality of speed revealed itself in diverse mental operations, and incidentally to discover the relationship of slowness to 'perseveration'.

A very varied series of tests were used for perseveration, and in addition estimates were made by teachers as to the degree of perseveration in the pupils, on the basis of the extent to which they started on a change of work with ease or, on the other hand, took some time in settling down to work: an admittedly unsatisfactory test of perseveration, for other important factors would influence the mode of action observed.

The main series of speed tests included both "leisure tests," done at the subject's own speed, and "speed tests" with a time limit. These included Sentence Completion, Directions, Concomitants, Analogies and Moral Classifications. The tests were varied in length so that each kind of test was worked at four different speeds. Teachers' estimates of slowness, made by both class teachers and manual instructors, were also obtained, care being taken to judge this as far as possible irrespective of intelligence. Estimates of intelligence were also obtained. The estimates for slowness, as might be expected, were not highly reliable, the reliability co-efficients being respectively .42, and .55, nor did they show much connexion with the slowness of the pupils as indicated by the test.

The leisure and haste tests, however, would seem to give adequate scope for the display of a general speed ability if such existed, but the results

show no clear evidence of such a general ability, nor was there any evidence that perseverance was a general cause of slowness, although, no doubt, it was of influence in individual cases.

Great thoroughness was shown in the application of the tests, each test being repeated 40 times in the course of the experiment. Incidentally this gave an opportunity of observing the effect of practice; no marked increase in the correlation with intelligence was observable in the results day by day. Apparently practice did not materially affect the subject's relative performance, from which the author concludes that objection to tests on the grounds of the possibility of coaching is not well grounded. This, however, seems hardly justifiable as of course the objection is usually made on the assumption that there will be definite coaching and not mere practice, in which case some tests at least are liable to the influence of special coaching, as has been shown by Mr. A. E. Chapman in a recent number of *The Forum of Education*.

The research is of interest in that it reveals that yet another of the supposed "general capacities" is probably a pure fiction.

C. W. V.

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VIII.—PHILOSOPHICAL PERIODICALS.

BRITISH JOURNAL OF PSYCHOLOGY. Vol. xv., Part 1, July, 1924. In 'A Study in Preperception' **Charles Fox** gives an account of a series of experiments designed to discover how far previous knowledge both of individual parts and of their names affects the observation and recall of a complex figure. Slides showing suits of armour were exposed for about one minute to groups of students, who afterwards wrote down all they could remember of the slides. One group now had a lecture on armour, the various parts and their names being referred to. A further test with different slides (of suits of armour) followed for both groups. In the first series of experiments this latter test followed immediately after the lecture, and the lectured group showed little superiority to the unlectured in the final test. Sometimes the previous instruction helped to systematise observation but sometimes "half-learned terms" obtruded themselves and divided attention. It was evident that the chief effect of "preperception" was to introduce order into the observation and that technical terminology was only of assistance provided that it was thoroughly well known. In the next series of experiments a more thorough study of the armour was made by the lectured group, and there was discussion and testing as to terms. An interval of a week was also introduced between the lecture and the final tests, so that the matter was more fully assimilated. Now the lectured group showed an improvement of about 120 per cent., the unlectured of only 40 per cent. Adequate time for mental assimilation of the knowledge given by the lecture turned out to be the kernel of the problem of preperception. Introspection revealed how the previous knowledge helped perception. One of the subjects put the matter in this way: "Lack of terms distinctly hinders my observation. I knew one technical term from reading Scott (tasset) and I always looked first to that part of the armour and had a feeling of sureness about this. Lack of terms hindered the mental separation of the armour into details; I could only remember each detail as soon as it was separated." It frequently happened that the elaborate decoration on the last two slides confused or baffled those who had no lecture, so that they lost the wood for the trees; but this never happened with the lectured group who were able to dismiss the decoration with a name, and subsequently to remember its nature. The knowledge of terms helped the dissection of the picture into parts; the terms also served as "pegs" on which to hang visual images. But it was found important that the terms should be known thoroughly. 'The Psycho-Galvanic Phenomenon in Dream Analysis,' by **A. G. Ikin, T. H. Pear, and R. H. Thouless**. This investigation was undertaken chiefly to examine some assumptions underlying current views of dream analysis and especially the relevance of different ideas brought up in the process of free associations with elements of the dream. By means of noting time intervals coinciding with the successive ideas in free associations with some selected element of a dream, it was possible to discover the variations of resistance (as measured by the psycho-galvanic reflex) which coincided with individual

associations. It is concluded that this method gives a more reliable means of studying the expression of emotions than that in which they are artificially aroused by sudden noises, etc., in the laboratory. There is a suggestion that "mental blanks" in association processes may occur either through "lack of cognition content" or "mental repression".

J. H. Wilson in a 'Comparison of Certain Intelligence Scales' describes an experiment the object of which was to compare the values of the following series of tests: 1. Terman Group Test of Mental Ability. 2. Otis Group Intelligence Scale. Adv. Exam. A. 3. National Intelligence Tests, Scale A2. 4. Northumberland Mental Tests, I. 5. Simplex Intelligence Scale. The subjects of the experiments were about 340 children from four different schools, elementary and secondary. Orders based on examination marks were also obtained. Also orders based on teachers' estimates of ability. The correlations between these orders and those given by the tests are rarely very high, but are higher with the American than the British tests. While Terman correlates slightly better with examination marks than the others, the National does so with the teachers' estimates. Probably the scale which correlates highest with these criteria (the only ones at our disposal) should be considered the best. Under these conditions, while there is but little difference between the scales, Terman and National rank foremost. As to discriminative capacity, the Otis scheme is the best, Terman and the National being very good; the Northumberland scale showing a somewhat limited "range". The individual tests comprising the scales vary considerably in their value. The National has the best balanced tests, while those of the Northumberland would appear to be the worst. The results show that the scales admit of some improvement, for in them are found erratic and badly-balanced elements. As the results also show that the tests which are unsatisfactory in one scale are quite satisfactory in others, the way to improve scales is to some extent indicated. Any one scale, it is seen, may have a greater value than any other at an assigned level. For such particular application of scales, selection must be left an open matter. On the other hand, where the scales are for general use in elementary schools, the American scales are better than the British. The order of preference of the writer for the former would be National A, Terman and then Otis. His data would show that the published norms must not be considered as suitable for English pupils.

W. H. Winch. 'Methods of Learning Poems.' [Groups of children of ages varying from about eleven to thirteen were tested in memorising poems of varying length and difficulty. The "method of equal groups" was followed, one group learning by the usual "part method," the other by reading the whole poem through and through. With short and difficult poems the part method proved superior. There was evidence that the whole method is superior where the sequence is easy and the unity of the poem decided.] Other articles are: 'The Sampling Error in the Theory of Two Factors,' by **C. Spearman** and **K. Holzinger.** 'A Note on the Correlation of Sums,' by **L. L. Wynn Jones.** 'A Further Note on the Phase Effect in the Localisation of Sound,' by **H. Banister.** 'Notes on the Pitch of a Combination of Tones,' by **P. R. Farnsworth.** Part 2, Oct., 1924. In an article on 'Eidetic Imagery' **G. V. Allport** discusses the results of several researches in the Marburg Institute of Psychology, and of some observations of the author himself on the nature of Eidetic imagery, i.e. images which are definitely localised in space, and which can be projected on a neutral background, and possess almost hallucinatory vividness. They are found to be very common among young children. The eidetic image differs from the ordinary visual memory-image in that (a) it is definitely localised in visual space even though recognisable as a subjective phenomenon;

(b) it is generally superior in detail; (c) its clearness is less dependent upon "structuration" or organisation in its content; (d) it is generally more accurate in its reproduction of detail; (e) it is generally more brilliant and accurate in colour; (f) it requires more rigid fixation for its arousal; (g) it is more dependent upon a favourable projection ground for its arousal and shows a greater "coherence" with this ground. It differs from the ordinary after-image in that (a) it may be aroused by a complicated object; (b) it is more detailed; (c) it lasts longer; (d) it is subject to voluntary recall after the lapse of considerable time; (e) it is subject to voluntary control and can be made to change its content by an effort of attention. The function of the eidetic image seems to be to preserve and to elaborate a concrete stimulus situation for the child in such a way as to intensify and retain for him the sensory aspects of experience. 'On the Nature of Images,' by G. Dawes Hicks. [After criticising the use of such terms as "residue" and "traces" or "sub-conscious copies" in discussions on imagery Dawes Hicks starts merely with the assumption of retentiveness or revival as an ultimate fact—that "in some form what has been continues to be". The continuity of imagination with perception is emphasised, and so is the influence of revival in perception. The term "images ought to be reserved for such contents as in memory and imagination do appear to stand over against the cognising mind as objects, and upon which the act of apprehension seems (to the conscious subject in question) to be directed". Then follows one of the main points of the paper—that there is always, in the case of such images, a nucleus, however scanty and concealed it may be, of something actually present to the senses upon which the act of discriminating is initially directed, and that around this nucleus a penumbra of imagery gathers, owing to the circumstance that the act of apprehension which is directed upon the real object is saturated, so to speak, with revived or retained awareness of the nature already described. A study of dream imagery affords further evidence of a nucleus of perceived fact as a basis of imagery. The problem remains how it comes about that in the process of imagination admittedly subjective factors do affect the "content apprehended" in a most pronounced manner, and give rise to constituents in it that seem to the imagining subject to be unmistakably objective. It is admitted that this cannot be fully solved but light is thrown upon it by the process of *Einfühlung*. Here those factors of the inner life which Hamilton designated "subjectively subjective" are capable of influencing in a very prominent way the content apprehended. If this be true, then, of states of feeling, there need scarcely be hesitation in allowing a similar statement to be true of what we have called revived awareness.] K. Koffka in 'Introspection and the Method of Psychology' discusses the difficulties of the introspective method in psychology as leading especially to invalid analysis. Behaviourism errs in being too analytic. The Gestalt-Psychologie aims at the task of bringing the facts of the unanalysed and the analysed phenomena together without using the hypothesis of substantial mental elements. This is achieved by adhering strictly to a functional point of view. Instead of describing a given unity by enumerating the elements into which it can be analysed we maintain that these wholes are what they are precisely in their specific character as wholes and that their parts—for they nearly always contain parts—are not pieces thrown together, but real organic members; that is to say that a number of the properties of these parts belong to them only so long as they are parts of this particular whole. The validity of introspection varies with the type of change produced by introspective analysis. R. R. Dobson in an article on 'An Investigation of Group Intelligence Tests,' describes a series of intelligence tests (Reasoning, Completions,

Analogies, and Mixed Sentences), applied to Grammar School pupils, Training College students, University students (including Honours Graduates) and a few University lecturers and professors. The last scored highest marks, the second best group being the men Honours Graduates. The correlations with estimated intelligence among the adults varied from '40 to '65. The results of the students at a Training College suggest that for the most part the best boys and girls from secondary schools do not enter the elementary teaching profession. 'The Didactic Value of Lantern Slides and Films,' by **G. Révész** and **J. F. Hazewinkel**. The authors describe a series of experiments with parallel classes. It was found that essays written on the subjects of the lantern slides were considerably longer than those on the subjects of the film and contained especially more important facts. This was true for each of the eighty children. There is no material difference between the continuous and the interrupted film, as compared with the lantern slide. Memory is not always affected in the same manner and to the same degree by the lantern slide and by the film; the difference decreases as the children advance in years, and with children of sixteen the difference becomes so small as to be almost negligible. A further article is 'The Relevance of Psycho-Analysis to Art Criticism,' by **A. M. Bodkin**.

JOURNAL OF PHILOSOPHY. xxii (1925) 4. **W. B. Mahan**. 'Social Interpretations of Ethics.' [Concludes that "morality is a highly symbolised degree of force. It is a representation of a line of action I ought to follow. . . . It is true that persuasion is the essence of morality; but it is also true that the essence of persuasion is to force one in the direction we would have him go. . . . Finally, moral force rests ultimately on physical force; for when it fails in a serious way, it is to physical force that it appeals."] **W. D. Wallis**. 'Is Purpose only Mechanism imperfectly Understood?' [Denies that it is "the aim of psychology to resolve all action into mechanism, into a system of absolutely predictable behaviour. We want that sort of world of material things, but not that sort of world of living beings. How promptly do we tire of one whose every word and act we can predict!"] xxii., 5. **M. R. Cohen**. 'The Insurgence against Reason,' I. [Tabulated under four heads: (1) psychology's detraction from conscious motives and attack on logic; (2) the reduction of everything to history; (3) the universality of change; (4) the limits of rationality; and argues against them.] **J. Dewey**. 'The Meaning of Value.' [Continues controversy with D. W. Prall (*cf.* xxi., 5), and points out (1) that a definition of value in terms of liking cannot be combined with making it an 'essence' in Santayana's sense; (2) that not only liking but also thought, in the sense of *recognition of meaning*, is involved in a value-situation.] xxii., 6. **M. R. Cohen**. 'The Rivals and Substitutes for Reason,' II. [Authority, as embodied in the Church, tradition, and expert opinion, and urges that "Reason must determine the proper use of authority," and that "rational science treats its credit notes as always redeemable on demand, while non-rational authoritarianism regards the demand for the redemption of its paper as a disloyal lack of faith."] **C. J. Ducasse**. 'Explanation, Mechanism, and Teleology.' [Points out that mechanism and teleology are not logically incompatible, and that only beings capable of belief and desire act purposively.] xxii., 7. **H. L. Hollingworth**. 'The Logic of Intermediate Steps.' [Illustrates the dangers of arguing that two things are genetically connected because we can point to intermediaries connecting them logically, and points out that such arguments involve the fallacy of affirming the consequent. The further questions whether this fallacy is not inseparable from 'verification,' and, if so, how the theory of knowledge is affected, are not

raised.] **M. R. Cohen.** 'The Rivals and Substitutes for Reason,' III. [Deals with the attacks on reason made in the name of individualistic empiricism and by philosophies of 'pure experience'. Avenarius is criticised for trying to do without any 'categories,' Mach for making mathematics purely mental. James is accused of a "denial of the objectivity of conceptual relations," and of rushing into "extreme anti-rationalism" to avoid "the Bradleyan logic of identity" which denies change.] xxii., 8. **H. C. Brown.** 'The Material World—Snark or Boojum?' [An attempt to 'restate materialism' so as to make it "adequate as a basis for aesthetics, ethics, and a philosophy of religion". "The physical world is nothing but that aspect of reality which the concepts developed in the physical sciences interpret successfully." Starting from this we must ask: "(1) what is actually meant to-day by the concept of matter, (2) what conditions limit or qualify the extension of it to other sciences, and (3) whether these limitations and qualifications justify the popular disparagement of it by philosophers". It is then found that 'space' and 'ether' are indistinguishable, and that the 'electron' and 'proton' are "certain critical regions of space". But the 'atom' "is the creation of a genuine novelty". So are the molecule, the crystal, the cell, and the mind. This makes the mind as truly a physical object as the atom, and accounts for its efficacy in restraining impulsive tendencies to act, anticipating consequences of action, and redirecting impulse to attain or avoid the anticipated consequences in accordance with certain feeling states.] xxii., 9. **H. Klüver.** 'The Problem of Type in Cultural Science Psychology.' [*Geisteswissenschaftliche Psychologie* is antagonistic to natural science psychology, and recognises the concept of value as significant and meaning as the primary thing. It was started by Dilthey and is best studied in Spranger's *Lebensformen*. The author tries to expound the conception of 'types,' but hardly succeeds in making it clear.] **J. R. Kantor.** 'The Significance of the Gestalt Conception in Psychology.' [A mixture of exposition and criticism of the Gestalt-psychology of Koffka and Köhler which is written from a violently behaviouristic standpoint. As a variety of 'mentalistic' psychology the 'Gestaltists' (!) attempt to "deal with a subject matter the entire existence of which is not only questionable but absolutely impossible". Still they are unconsciously "approaching the organismic or objective attitude" of behaviourism.] xxii., 10. **W. A. Hammond,** 'James Edwin Creighton,' and **K. Gilbert,** 'James E. Creighton as Writer and Editor.' [Obituary appreciations of the late editor of the *Philosophical Review*, by a colleague and by a pupil.] **D. W. Prall.** 'Essences and Universals.' [Discusses Johnson's Logic, Stout's Hertz Lecture, and the Aristotelian Society's symposium on Universals, in order to meet Stout's criticism of Johnson by Santayana's concept of 'essence'.]

KANT-STUDIEN. Band xxix., Heft 3-4, 1924. **Paul Tillich.** *Ernst Troeltsch, Versuch einer geistesgeschichtlichen Würdigung.* **Arthur Liebert.** *Ernst Troeltsch: Der Historismus und seine Überwindung.* [This, like the first article, deals with the struggle against historical relativism in general terms. The great intellectual evil of our age is the paralysis of our power of decision by too much intellectualism and too much history, the great speculative crisis of our age is the struggle against a relativism that would destroy the objectivity of all values. The time has come to turn away from the burden of the merely historical and seek the super-historical presupposed in all history. In this Troeltsch was a pioneer, though too much of a historian himself to attain success.] **Hans Driesch.** *Kant und das Ganze.* [Contends that Kant ought to have made "Ganzheit," in the sense in which the term would cover all

organic wholes, a category and not merely a regulative idea. The chief passages in the "Critique of Pure Reason" and the "Critique of Judgment" referring to this question are very briefly and ably analysed.] **Karl Bornhausen.** *Die Religion der Vernunft.* [In spite of its title the article is confined practically to Cohen, and is intended to show the divergence between his real religious beliefs and his agnostical metaphysics.] **Herman Harris Aall.** *Das Gesetz des moralischen Kontrastes zwischen Gefühl und Vorstellung.* [The chief novelty in the article is the insistence on the importance of a third stage, Heuchlerei, contrasted with the stage of selfish desire and the stage of moral action. While in moral action the lower objects of desire are used as means to real goods, in the third stage the appearance of the latter is used as a means to the acquisition of the former, so that the agent either hypocritically imposes on other people or convinces himself into the belief that he is acting to attain the higher good when he is really acting in order to attain the lower. Instead of holding that this stage is a subordinate phenomenon which presupposes recognition of the moral value, he treats it as the fundamental intermediate stage in the training by which man starting from desire acquires real morality.] **Paul F. Linke.** *Die Existentialtheorie der Wahrheit und der Psychologismus der Geltungslogik.* [The article starts as though the author intended to defend the subjectivist point of view, but his real intention is rather to insist on the correlation of existence and truth. "Psychologismus" is defended only in the sense in which it means that metaphysics always involves some psychology, as a denial of the objectivity of truth it is explicitly repudiated. The author is interested, however, in refuting the doctrine which interprets objectivity as involving the being of a realm of timeless transcendent truths separate from existences. He admits that the attribute of truth is in its nature non-temporal, but he maintains that this is equally the case with many, if not all, other attributes, e.g., a past chemical process is still chemical even after it is over. The last few pages are very suggestive.] **Hans Reichenbach.** *Die Bewegungslehre bei Newton, Leibniz und Huyghens.* [Gives a very clear exposition of Leibniz's theory of relativity.] **Gustav Doetsch.** *Der Sinn der reinen Mathematik und ihrer Anwendung.* [Deals with the recent theories as to the relation of mathematics to existence, and suggests a solution of the problem on the lines of "regulative ideas".] **Eugen Böckli.** *Paradoxien der Zeit.* [Tries to establish critical (Kantian) idealism by arguments of the Zeno type against the reality of time. He argues that no part of the future can ever become past because half of it would first have to become past, then half of that and so on *ad infinitum*. But his arguments, ingenious as they are, seem to presuppose the conception of time as a series of separate parts, not a genuine *continuum*. He also, after pointing out the difficulties involved in holding that the self we know is, as temporal, appearance, seems to dismiss them very curtly in his solution. His brief summary of Zeno's arguments and of their refutations at the beginning of the article is well worth reading for its own sake as it is remarkably clear.] **Ferd. Pelikán.** *Die neueste tschechoslowakische Philosophie.* [Reveals a promising philosophical movement in Czecho-Slovakia since the war, giving a remarkable number of authors with short summaries of their work.] **Jonas Cohn.** *Emil Lask, Gesammelte Schriften.* **E. v. Aster.** *Die 2 Auflage des Kantischen Briefwechsels.* **Paul Menzer.** *Neue Kantbriefe.* [Gives three newly discovered letters of Kant. The only one with any philosophical content lays down a scheme of categories to govern political legislation.] **Reviews, etc.** Band xxx., Heft, 1-2, 1925. **Ernst Jaensch.** *Zum Gedächtnis von Alois Riehl.* **Betty Heimann.** *Zur Struktur des indischen Denkens.* [Tries to derive the main characteristics

of Indian thought from the conception of all beings as having equal value.] **Johannes Geiffken.** *Geisteskämpfe im Griechentum der Kaiserzeit.* **Hans Luthje.** *Christian Wolffs Philosophiebegriff.* [Able analysis of the conception of the "possible" as the object of philosophy, as held by Kant's predecessor.] **Carl Siegel.** *Kants Antinomiendehre im Lichte der Inaugural-Dissertation.* **Hans Schütz.** *Eine unbekannte Predigt Fichtes.* [Brief (2 pages) but very powerful address on moral effort and immortality.] **Eduard Färber.** *Hegels Philosophie der Chemie.* [An able summary with reference also to Schelling.] **Walter Del-Negro.** *Zum Wahrheitsproblem.* [Summarises briefly and well relativistic types of epistemology, giving a very good criticism of pragmatism (pp. 124 ff.). The statement of his own view at the close is less satisfactory. He defines it as "Konventionalismus," but does not make clear how this alleged dependence of truth on "conventions" produced by acts of will is reconcilable with his denial of relativism.] **Reinhard Kynast.** *Zur Synthesis in der reinen Logik.* **Ferdinand Tönnies.** *Gemeinschaft und Gesellschaft.* [First draft of book of that name by Prof. Tönnies published in 1887. The article is mainly occupied with a sketch of general psychology in so far as the latter can be made a basis for social sciences.] **Josef Somogyi.** *Die Philosophie Akos Paulers.* [Interesting short summary of a philosopher who is regarded by him as providing the chief contribution Hungary has made to philosophy.] Reviews, etc.

The numbers of the Kant-Studien are in future to be accompanied by supplements, consisting of reviews and one or two short articles on general philosophy intended also for readers with little special philosophical knowledge. In the present number, the contemporary situation in the department of the philosophy of history is summarised by **Georg Mehlis**, who emphasises as agreed points the conviction that history has a method of its own, and the prominence of the idea of civilisation as the proper subject of history. This is followed by a more general article still on contemporary philosophy by **Jonas Cohn**. The number is also accompanied by a pamphlet by **Prof. Paul Hofmann** on *Das Religiöse Erlebnis* (pp. 88). The essential moment of the religious experience is held to be a "value-experience" not a "value-judgment," and the object valued is primarily "the whole of my life or being," because religion is based on the need for "salvation," and on the question as to "my" relation to the whole of reality which is involved in this individual need. The author distinguishes as three main types of the experience of "salvation": (1) salvation by a change in one's ideals and desires, by the realisation that external goods are of little importance. This type is exemplified by such different attitudes as, on the one hand, the Buddhist renouncing of desire, and, on the other hand, the modern insistence on the supreme value of will. (2) Salvation by resignation, by admitting our weakness in face of destiny but accepting it as a good rather than an evil. (3) Salvation by the belief that reality is such as to be in conformity with the ultimate realisation of our good. The subject is treated with great ability.

ANNALEN DER PHILOSOPHIE. Band iv (1924), Doppelheft, 4-5. **M. Pasch.** *Der Begriff des Differentials.* [An attempt to refute, in connection with this branch of the subject, Vaihinger's contention that mathematics depend on untrue "fictions".] **O. Brühlmann.** *Das Licht als Grundlage der Relativitätstheorie.* [Contends that the only reason for holding the velocity of light to be constant and the maximum velocity possible, is because all measurement of other motions ultimately depends on light, and argues that light ought therefore not to be treated as one object among others but rather as our subjective standard. This contention is intended to strike at the basis of the doctrine of relativity, but

H. Reichenbach in an attempt to refute this article says that the argument involves a confusion between the fact of vision and light as a physical entity inferred to account for it, so that it is only in the former sense, not in the latter, that light occupies the position ascribed to it by Brühlmann. The first article and the brief attempt to refute it by Reichenbach are printed together.] **H. L. A. Visser.** *Führt die kollektiv-psychologische Forschung zum Fiktionalismus?* [After considering briefly the place of fiction in social life, the author asks whether Vaihinger's "Fiktionalismus" can supply an adequate world-outlook, and replies in the negative on three grounds: (a) fiction is very useful for knowledge but it cannot constitute the whole of knowledge; (b) our ideas on fiction may change so that what we first held to be a fiction may become a reality; (c) we can hardly give up the hope of a "Weltanschauung" which would have a firmer basis in reality.] **W. Del-Negro.** *Die Fiktivität der Kantischen "Erscheinung"*. [Gives some interesting arguments for the view that Kant's treatment of phenomena as in a very important sense "empirically real" is an inconsistency that should have been abandoned by Kant if he had carried his philosophy to a logical conclusion.] **W. Lebmänn.** *Spengler als Künstler und Dogmatiker*. [Deals with Spengler's "Untergang des Abendlandes," arguing that it is a great work of art and nothing else, which the author wrongly supposed to be a history and in a sense a philosophy.] **G. Boehmer.** *Ein Vorgänger der Philosophie des Als-Ob vor 235 Jahren*, with Nachschrift by H. Vaihinger. **G. Panconcelli Calzia.** *Das Als-Ob in der experimentellen Phonetik*. **W. Scholz.** *Kritischer Konventionalismus und Philosophie des Als-Ob*. [Conventions are not necessarily fictions, they may also be (1) mere statements of procedure, or (2) "universal hypotheses" which as such claim truth, hence divergence between Konventionalismus and Fiktionalismus.] Reviews, etc. Heft 6. **J. Schultz.** *Fiktionen der Psychologie und Mythologeme der Psychoanalytik*. [Particularly interesting analysis of Freudian conceptions with a view to eliminating the mythological idea of a purposive unconscious. The author hopes, e.g., that the supposed elaborate symbolism of dreams may be explained by association in so far as really founded on fact, since symbol and symbolised must obviously be associated, and it is impossible adequately to establish the non-ambiguous nature of the alleged "symbols".] **P. Volkmann.** *Studien über Ernst Mach vom Standpunkt eines theoretischen Physikers der Gegenwart*. [A brief study of Dingler's book, *Die Grundgedanken der Machschen Philosophie*, and Mach's book on *Die Prinzipien der Wärmelehre*.] Reviews, etc. Heft 7. **J. Reinke.** *Natur und Seele*. [A defence of the doctrine of an intermediate element between soul and body to which is due the life and non-conscious physiological development of the organism. It touches briefly upon many wider problems, and, in particular, asks the question as to what is included in Nature without justifying the answer given at all fully. The article throughout keeps in close touch with physical science.] **M. Pasch.** *Begriffsbildung und Beweis in der Mathematik*. [Emphasises importance of cases in mathematics where no proof is possible and defines distinction between these and cases of real demonstration.] Reviews, etc.

REVUE NÉO-SCOLASTIQUE DE PHILOSOPHIE. xxvii Année, No. 4, November, 1924. **Baron Descamps.** *Le génie des langues et le problème de la parenté linguistique*. [A consideration of the different kinds of evidence which can be used to establish family relationships between languages and their respective degrees of weight. In spite of difficulties which fuller knowledge may dissipate, the evidence which points to a single common origin of the languages of mankind is steadily growing.] **R.**

Feys. *La transcription logistique du raisonnement* (cont.). [The author concludes his account of the work of Boole and Schröder and then proceeds to give a good and lucid general sketch of the method and symbolism of Peano and its further elaboration by Whitehead and Russell. Possibly he does not do sufficient justice to the strongly-marked influence of Frege on the ideas and notation of *Principia Mathematica*. The formal distinction between an asserted and a merely enunciated proposition, the discrimination between "any given x is y " and "every x is y ," the use of the symbol $\dot{x}(\phi x)$, to take no other examples, are all characteristics of the Whitehead-Russell notation which come direct from the symbolism of Frege, and their regular employment marks a definite advance on Peano which should not be ignored.] **E. Janssens.** *Les premiers historiens de la vie de saint Thomas d'Aquin* (concl.). [Proof that P. Calo's *Life* is dependent both on William de Tocco and on Bernard Gui, the latter of whom had been shown in an earlier article to depend on the former. The strictly biographical part of Tocco's work may be dated between December, 1318, and September, 1319. The book was not absolutely completed until after the canonisation of Thomas on 18th July, 1323. The *Legenda* of B. Gui must have been completed within a few years of this date. Calo's *Life* is later than the canonisation but probably not later than 1342. Tocco's sources are (1) his own personal recollections, (2) those of the family of Thomas and of many Dominicans who had known him, (3) reports of the monks of Fossa Nuova, where the saint died, (4) the narratives of a number of the persons whose depositions were examined in the process of canonisation, (5) possibly, but not certainly, the *Vitae Fratrum* of Gérard de Frachet and the *Bonum Universale* of Thomas of Cantimpré. Gui drew not only from Tocco but from Ptolemy of Lucca and from some of the official documents of the process of canonisation. Calo appears to have got some particulars from a *Life* of Thomas now lost. The Bollandists were thus right in regarding Tocco as our primary authority.] **M. de Wulf.** *Clemens Baeumerker*. [A short obituary notice of this most distinguished scholar.] **Comptes Rendus, Chronique**, etc. II^{ème} série, No. 5. Février, 1925. **L. Noel.** 'Le réel et l'intelligence.' [The reality of the "external world" is immediately certain, but it is not sufficiently justified by a mere appeal to "common sense," the question being, as Kant said, one not of fact but of right. The required justification is provided by the consideration that, in the most elementary act of reflection on the data of sense the mind "apprehends at once the concept in which its act results and the reality from which it starts."] **J. Leclercq.** 'Le devoir d'altruisme.' [Man has a duty to man as such, and the more moral philosophy has become "laicized," the more apparent has the fact become. But what is the rational justification of this conception? It is not to be found in purely individualistic considerations, as is shown by the futility of Mill's "proof of the principle of utility," nor yet in the mere metaphor of the "social organism". Why may I not treat "barbarians," to whose "civilisation" I owe no debt whatever, as so many rabbits? Because God has made them, and God's purpose is that every man should freely "perfect his own existence". This purpose it is a duty to the Creator to respect. This is the real thought of St. Thomas; the language he sometimes uses about the individual man as a mere "part" of society is no more than a legacy from the Aristotelian, but non-Christian, depreciation of the "particular". The writer's thought comes nearer than he suspects to that of Kant, with whom it is really "rational personality," not "human nature" for which unconditional respect is demanded. The question of "duties to animals" should not have been dismissed in one contemptuous note. If duty to man is really founded on duty to God,

why may not duty to God equally be the foundation of duties of some kind to all the creatures? Even the wanton destruction of a flower might be a violation of duty to the flower's Maker.] **R. Feys.** 'La transcription logistique du raisonnement' (concl.). [The enormous practical value of "logistic" is indisputable, but the question remains whether it can absorb or dispense with the older logic. There are limits to the reduction of logic to a theory of implications and propositional functions. "Necessary connexion" cannot be adequately expressed in terms of them; "logistic" cannot deal with contingent propositions; we can raise paradoxes about propositional functions "analogous to those which led Russell to abandon the logic of 'classes'." For all these reasons we still need a "logic of the abstract concept". In epistemology Russell is led by his "logistic" to an unsatisfactory position half-way between subjectivism and realism. I note, by the way, that on page 78 the writer commits himself to the view that aRb means that the "couple (a, b)" has the property of being "in the relation R ," thus forgetting the difficulty that relations have "sense".] **R. Kremer.** 'Bulletin d'épistémologie.' [Deals, among other recent works, with those of Strong and L. A. Reid.] Reviews, etc.

LOGOS. Anno vii., Fasc. 3, Luglio-Settembre, 1924. **M. de Franchis.** *L'estetica delle matematiche.* [The "beauty" of the discoveries of mathematical science consists in the establishment of unforeseen identities and bonds of union, not only between different propositions, but between different fields of thought.] **A. Banfi.** *Il naturalismo romantico del Guyau e le correnti del pensiero contemporaneo.* [An attractive study of Guyau's philosophy, its place in the naturalistic movement, its affiliation with, and in many respects anticipation of, Bergson's views; a synthesis of naturalism and the rights of the spirit. It is not opposed to religion; on the contrary, religion—every positive religion included—has, at its root, certain preformed, vital motives of the spirit.] **L. Valli.** *Per la Croce e l'Aquila di Dante.* [A reply to Ercole's criticism of Valli's claim to have discovered in the Divine Comedy a secret symbolism of the Cross and the Eagle, representing the Church and the Empire respectively as alternative means of grace. Ignorance of this hidden symbolism and its "symmetries" means failure to appreciate Dante's "terrible originality".] **N. Abbagnano.** *Il problema dell'arte.* [The two fundamental positions as to the relation of art to reality: one, that art is a purely subjective faculty, wholly shut out from reality; the other, that it is itself one of the moments of reality, or indeed its ultimate and supreme principle. The former presupposes dualism,—spirit, intellect, as the passive mirrors and unreal shadows of what is; this is the view from which the Greeks, from Plato down to Plotinus, never escaped. On the other view, spirit is the active principle, creator of the world, and its moments form part of the actual process of the real. This is the tendency of modern theories of art, as the animating principle of the whole universe,—the "free expression of a free and incoercible force that transcends all schemata" of the intellect, all the rigid determinisms of reason—and as a revelation of the absolute.]

IX.—NOTES.

MIND ASSOCIATION: ANNUAL MEETING AND JOINT SESSION WITH THE ARISTOTELIAN SOCIETY AND THE OXFORD PHILOSOPHICAL SOCIETY.

The Annual Meeting of the Mind Association will be held this year at Balliol College, Oxford, on Friday, July 24th, at 5 p.m.

After the Meeting there will be a **Joint Session of the Aristotelian Society, the Mind Association, and the Oxford Philosophical Society**, for which the following arrangements have been made:—

FRIDAY, 24TH JULY.

8.30 p.m. Chairman: Prof. A. D. Lindsay.

Symposium: "The Nature of Intelligence." Prof. H. Wildon Carr, Prof. A. Wolf, and Prof. C. Spearman.

SATURDAY, 25TH JULY.

10 a.m. Chairman: Prof. G. E. Moore.

Symposium: "The Concept of Energy." Mr. C. R. Morris, Dr. Dorothy Wrinch, and Prof. Leonard J. Russell.

2.30 p.m. Chairman: Dr. J. S. Haldane.

"The Biological Basis of the Sense of Time." Dr. Ivy Mackenzie.

8.30 p.m. Chairman: Prof. Wildon Carr.

Symposium: "Croce's Theory of the Practical Nature of Science." Prof. J. A. Smith, Prof. A. D. Lindsay, and Dr. F. C. S. Schiller.

SUNDAY, 26TH JULY.

2.30 p.m. Chairman: Miss H. D. Oakeley.

Symposium: "Plato and Aristotle." Mr. P. E. More, Prof. W. D. Ross, and Prof. G. Dawes Hicks.

8.30 p.m. Chairman: Prof. S. Alexander.

Symposium: "Is Art a form of Expression or of Apprehension?" Mr. J. MacMurray, Mr. C. E. M. Joad, and Mr. A. H. Hannay.

Accommodation will be provided for men at Balliol College and for women at St. Hugh's. The inclusive charge for board and lodging at Balliol College from Friday afternoon till Monday morning will be £1 11s. 6d.; no rebate will be given for meals not taken. Charges for part time accommodation will be: Breakfast 2s., Lunch 2s., Tea 1s., Dinner 3s. 6d. The inclusive charge at St. Hugh's for room and breakfast for the three days will be £1. Other meals can be taken at Balliol College for an inclusive charge of 5s. 6d. a day.

Meals will be served at Balliol College :—

Breakfast, 8 to 9 a.m.

Lunch, 1 p.m.

Tea, 4.30 p.m.

Dinner (Morning Dress), 7 p.m.

Applications for accommodation and all payments should be made to the Treasurer of the Aristotelian Society—

Dr. F. W. Thomas,
6 Granville Road, Sevenoaks, Kent.

The Registration charge of 10s. is for expenses including the printing and distribution of the papers. The papers will be published by the Aristotelian Society in a supplementary volume which, if ready, will be distributed to Members before the Meeting. Any Members of the three Societies unable to attend the Meeting can subscribe for the volume by sending the registration charge to the Treasurer.

Members are requested to apply as early as possible.

CONFERENCE ON PSYCHOLOGY OF RELIGION.

This year an attempt will be made for the first time to include in the *Summer School of the University of Geneva* a week's course on the *Psychology of Religion*, from Monday, 31st August, to Saturday, 5th September. Lectures will be given by prominent Scholars from various countries, amongst others by Prof. J. Leuba, of Bryn Mawr College, U.S.A., one of the pioneers in this department, Prof. Raoul Allier of the Paris Faculty of Theology, Prof. Jean Monnier of Strassbourg University, Dr. Robert Thouless of Manchester University, author of an Introduction to religious Psychology, together with a number of Swiss Scholars.

The subjects treated are of wide interest dealing with questions of method, ecstasy, religion of the child and of primitives, magic, temperaments, conversions, religious art, etc.

The fee for the course is 30 frs., for Students 20 frs. All enquiries should be addressed to M. G. Berguer, lecturer in the University of Geneva, Genthod, near Geneva.